National Outlooks

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practitioners

world of work

counsellors

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teachers

training

Job Futures 2000

1 Outlooks by Occupation

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Minister
of Human Resources
Development

Ministre
du Développement
des ressources humaines

Ottawa, Canada K1A 0J9

MESSAGE FROM THE MINISTER OF HUMAN RESOURCES DEVELOPMENT CANADA

Welcome to *Job Futures 2000*, a guide to the jobs of tomorrow for students, parents, job seekers, teachers, career and education counselors.

Deciding on a career path has never been easy. It has always involved difficult choices. Preferences and aptitudes must be matched with education and training choices. As we move into the new millenium, we also want to keep the future job market in mind.

The Government of Canada is strongly committed to providing young Canadians with quality career information, to supporting all Canadians in their career and education choices, and to offering the best labour market information through such endeavours as *Job Futures*.

Available in print and Internet formats, *Job Futures 2000* profiles current and future labour market conditions in Canada by occupation and field of study. New labour market information has been added to assist education and training choices. *Job Futures 2000* is also more accessible and user-friendly. State-of-the-art, dynamic web technology allows users of the web version to customize requests for information.

I believe you will find *Job Futures 2000* to be an indispensable resource in helping you make informed choices.

Jane Stewart

Jane Stewart

Canada

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4143	School and Guidance Counsellors	184
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736	Train Crew Operating Occupations	340
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7411	Truck Drivers	348
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0111 Financial Managers 6
0112 Human Resources Managers 8
012 Managers in Financial and Business Services 10
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Technical, Paraprofessional and Skilled Occupations

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0111	Financial Managers	6
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012	Managers in Financial and Business Services	10
013	Managers in Communication (Except Broadcasting)	12
021	Managers in Engineering, Architecture, Science and Information Systems	14
031	Managers in Health, Education, Social and Community Services	16
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051	Managers in Art, Culture, Recreation and Sport	20
061	Sales, Marketing and Advertising Managers	22
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945 Machine Operators and Related Workers in Fabric and Leather Products Manufacturing 400
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Job Futures 2000, LMI and Career Planning

Job Futures 2000

What is Job Futures 2000?

The national edition of *Job Futures 2000* is a suite of products that includes:

- World of Work: Overviews and Trends;
- Part 1: Outlooks by Occupation;
- Part 2: Outlooks by Field of Study; and
- the Job Futures Companion.

Job Futures 2000 provides Canadians with the latest information available about the world of work—information that is important for anyone in the process of making decisions, or advising others about making decisions, related to career or educational planning. It includes:

- overviews of the labour market and general economic trends;
- detailed information on all occupational groups and post-secondary fields of study;
- current and future labour market conditions; and
- prospects for finding work in the Canadian workforce.

The data, analysis and national outlooks contained in *Job Futures 2000* are produced by a team of HRDC specialists who base their projections on a set of sophisticated economic models and forecasting tools, including the Canadian Occupational Projection System (COPS) of the Applied Research Branch of Human Resources Development Canada (HRDC). While no one can foresee exactly how the future will unfold, particularly over a horizon of many years in a rapidly changing labour market, these projections represent the best judgement of the HRDC specialists in consultation with private and public sector experts.

Job Futures 2000 is only one of many sources of labour market information for Canadians. Other complementary material is available. For example, most provincial governments and regional offices of HRDC also produce, often in collaboration, provincial occupational outlooks. A list of these and other related publications can be found in the section, *"For More Information."*

Who can use Job Futures 2000?

Job Futures 2000 is useful for all Canadians interested in the current and future labour market and the links between education and the world of work. They include:

- *career/education professionals* providing advice to their clients on career choices, career changes or prospects for finding work;
- *teachers* providing information to their students on occupations, the labour market or for career and education planning;
- *parents* who wish to help their children plan for the future;
- *students* making educational and career decisions or who want to know more about work prospects in their field of study;
- *workers* thinking about upgrading their skills or making a career change;
- *unemployed* persons exploring job prospects and training opportunities; and
- *individuals* re-entering the labour market.

What is included in each part of the Job Futures 2000 suite?

World of Work: Overviews and Trends
—new in Job Futures 2000

This new part of *Job Futures 2000* addresses topics crucial to understanding today's labour market. It is designed to help users become informed about a variety of factors so that they can make, or advise others in making, good career and education decisions. It examines broad economic and labour market issues as well as providing detailed information on key labour market indicators and the benefits and costs that may be associated with different educational or occupational paths. Topics included are:

- ***Overview of Outlooks by Occupation:*** presents overall trends and average ratings (good, fair or limited) related to current and future labour market conditions by skill level—amount of education and training required to work in an occupation, and by skill type—the broad industry category in which occupations are concentrated. Exceptions are listed and briefly explained.
- ***Overview of Outlooks by Field of Study:*** summarizes the overall average ratings of current and future labour market conditions for recent post-secondary school graduates, spanning four educational levels and nine broad fields of study. Exceptions are listed and briefly explained.
- ***Emerging Sectors and Occupations:*** provides a synopsis of some new and growing sectors and occupations, and describes the skills that job seekers in these areas may need to acquire. These occupations are in addition to the more traditional occupations detailed in *Part 1* and *Part 2*.
- ***Other Key Factors to Consider:*** provides an assessment of several other economic indicators that people may want to take into account when making education or career choices. The analysis reveals that an individual's labour market outcomes generally improve if they have more education and that these results can vary by person, occupation, field of study, region, and over time. The outcomes evaluated include lifetime earnings by occupation, net benefits to investing in post-secondary education based on various levels and fields of study, factors related to transitions in and out of the labour force, and relative unemployment rates.
- ***Across Canada:*** presents a sample of occupations with favourable outlooks over the next few years for Canada as well as for each province.

Part 1: Outlooks by Occupation

This part of the *Job Futures 2000* suite offers students and job seekers important occupational information that can help them make informed decisions about possible career routes. It provides a "snapshot" of each occupational group, designed with graphics as well as text, and includes detailed descriptions about current labour market conditions and what may impact or change these conditions in the coming years. *Part 1* includes the following sections:

- ***Indexes:*** organizes the occupational profiles alphabetically, by broad industrial groups (NOC skill type), and by education and training levels (NOC skill level).
- ***Understanding the Occupational Profiles:*** provides a detailed explanation of each section of the profiles and how to interpret the information and data for career planning purposes, as well as describing the underlying methodologies and data sources.
- ***For More Information:*** provides a list of related publications or Web sites.
- ***Occupational profiles:*** summarizes 211 occupational groups, covering the entire Canadian labour market, except military occupations. The order of occupations is based on HRDC's *National Occupational Classification* (NOC) which organizes work according to *skill levels*—levels of education and training, and *skill types*—type of work performed by industry group. Each occupational profile includes information on:
  - job duties and responsibilities;
  - the level and type of education, training and experience required to find work in that occupational group;
  - key labour market characteristics of the group, such as recent employment trends; distribution of workers by age; share of people working part-time, full-time, and self-employed;
  - key sectors where workers in the group are employed;
  - a range of earnings information;
  - relative unemployment rates;
  - current prospects of finding work; and
  - prospects of finding work over the five years to 2004.
- ***Appendices:***

  Glossary: defines terms and phrases—new in *Job Futures 2000*.

  List of Organizations: provides information on private and public sector organizations consulted in the preparation of the profiles.

  Detailed Index of Occupational Titles: provides a list of all occupational titles found in the headings and text of the profiles.

It is strongly recommended that users refer to the chapter, *"Understanding the Occupational Profiles,"* to make the best use of the information contained in the profiles.

Part 2: Outlooks by Field of Study

This part of the *Job Futures 2000* suite is designed to help students and people seeking to upgrade their skills make informed educational and training choices. Each field of study provides detailed information on that particular educational/ training route and describes the work experiences of recent graduates. *Part 2* includes the following sections:

- ***Indexes:*** organizes the field of study profiles alphabetically, by field of study, and by level of education.
- ***Understanding the Field of Study Profiles:*** offers a detailed explanation of each section of the profiles and how to interpret the information and data for career planning purposes, as well as describing the underlying methodologies and data sources.

- ***For More Information:*** provides a list of related publications or Web sites.
- ***Field of Study Profiles:*** summarizes 155 fields of study that include all Canadian post-secondary programs, including trade and vocational schools, colleges, and universities. The classification of the fields of study is based on Statistic Canada's student information system, with a coding structure adapted by COPS. Each field of study profile includes information on:
  - content of the program and its availability by province;
  - prerequisites;
  - key occupations in which recent graduates found work;
  - how these graduates feel about their educational choices and their jobs;
  - key labour market characteristics of recent graduates, such as recent employment trends; movement between occupations or sectors (mobility); share of people working part-time, full-time, and self-employed;
  - a range of earnings information;
  - relative unemployment rates;
  - current prospects for finding work; and
  - job prospects for graduates over the coming years.
- ***Appendices:***

  Glossary: defines terms and phrases—new in *Job Futures 2000.*

  Detailed Index of Field of Study Titles: provides a list of all fields of study found in the headings and text of the profiles.

It is strongly recommended that users refer to the chapter, *"Understanding the Field of Study Profiles"*, to make the best use of the information contained in the profiles.

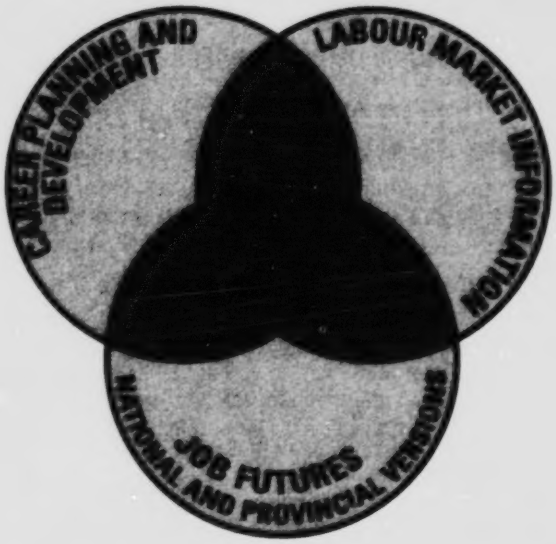
Job Futures Companion

The *Job Futures Companion,* new in 1999, is designed to act as a bridge between the labour market information contained in *Job Futures 2000* and the everyday issues that students and work searchers face in employment and career planning. The *Companion:*

- ***Uses a question-and-answer format*** based on survey results of typical questions asked by job seekers and students.
- ***Provides steps*** for users to follow to find the relevant information in *Job Futures 2000*; and
- ***Offers sample scenarios*** demonstrating how a career practitioner can use *Job Futures 2000* to answer a client's questions about career planning.

How does Job Futures 2000 fit into Career and Education Planning?

Job Futures 2000 is a useful tool for individuals and advisors involved in the education and career planning process. But where and how does it fit?


CAREER PLANNING AND DEVELOPMENT
LABOUR MARKET INFORMATION
JOB FUTURES
NATIONAL AND PROVINCIAL VERSIONS

As demonstrated below, the detailed information in *Job Futures 2000* is useful for each career planning step by providing people with valuable insights about the Canadian labour market that will be pertinent to their educational and occupational choices.

However, it is important to remember that no one resource can be all-encompassing. *Job Futures 2000* should be used in conjunction with other sources of information. (See *"Across Canada"* in *World of Work: Overviews and Trends* and *"For More Information"* in *Part 1* and *Part 2.*)

Important Planning Steps

There are a number of important steps that people need to take in their career planning and development—self-assessment, labour market research, and "informed" decision-making.

Parts of this section are adapted from: Labour Market Information or LMI Guide, working draft, HRDC, Waterloo Region, Wellington and Perth Counties, January 2000.

Step 1: Self-assessment

Students and work searchers should identify and explore individual factors that affect their choices such as personality traits, interests, values, wishes and dreams, lifestyle activities, skills, aptitudes, education/training, work-related experience, and health. There are a number of tools available to help them with this part of the journey. Please see *For More Information* in *Part 1* and *Part 2* for a partial list. Keep in mind that these tools cannot measure personal motivation, attitude, or the drive to succeed—all of which can affect individual success in the workplace.

Step 2: Labour Market Research

Students and work searchers also need to undertake, at the very least, some basic research related to the labour market. This labour market information (LMI) is an important complement to their self-assessment as it can help them better understand external factors that may affect their career choices.

LMI is valuable. It includes both qualitative and quantitative information, related to the demand for, and the supply of, labour. It provides facts and figures about a place—the "market"—where an exchange occurs between employers needing workers and individuals offering their baskets of "goods", containing a blend of their education, skills, experience, and various other personal characteristics.

There are several labour markets to consider. Students and work searchers need to understand that LMI exists in four "markets"—local, provincial, national, and global — that function simultaneously. Each "market" has its own levels and types of LMI, and the supply and demand for workers in each may be different, depending on the type of occupation or work in question. Some questions for students and work searchers to consider:

- *Which "market" most affects my area of work?* An occupational group may operate in one or more of the different labour markets. For example, many workers in professional occupations, such as engineers, computer analysts, and consultants, generally operate in a national or global labour market.
- *How do the local and/or provincial "markets" affect my area of work?* Local and provincial conditions may vary considerably and affect work issues, such as employment opportunities and earnings.
- *What "market" is most involved with my personal career options?* Individuals' personal situations may determine which labour market may have the greatest impact on their decision-making. For example, if a person's options are limited to a local area due to personal interests or family responsibilities, his/her awareness of local labour market conditions will be extremely important.

LMI is important. Students and work searchers need to make the best investment of their time, money and education as they plan for the future. To do this, they must assess as much relevant information as they can find, regarding the type of career they are considering. LMI can impact directly or indirectly on their choices.
For example:

- *Some people may make career decisions based completely on LMI factors.* They may choose a job after analyzing what job pays the most or which job has a good outlook for obtaining and maintaining employment. Or, they may know what kind of job they want or are trained for, and are seeking the best location in Canada for finding that job. Perhaps they already know their preferred work locality and want to know what jobs are available in that area.
- *Other people may make career decisions that arise primarily out of personal needs and desires.* However, being aware of current or future labour market conditions will still be extremely useful for them. While some students and work searchers may have already decided on fields of study, preferred occupations, or locations, their research on LMI may reveal that relative conditions are not favourable for their choices. This knowledge will help prepare them for potential difficulties and reduce the possibility of unpleasant surprises. LMI may also help people target a job search, have an idea of what level of earnings to expect, or realize that it may take some time to find or keep their preferred job; or, perhaps, that they should consider other occupational options.

Step 3: Making Informed Decisions

Self-assessment and LMI research will not only help people form a solid "knowledge" base for making effective choices, but will also help them develop confidence in their choices. They will feel these "informed" decisions are right for them. And, whether their knowledge of LMI impacts on their decisions directly or indirectly, they will be much better prepared to enter the world of work.

Step 4: Staying Informed

The labour market is constantly changing. As a result, people need to regularly collect, validate, and interpret new LMI to ensure that their ongoing decision-making is based on the latest information available. They need to gather specific information on subjects such as hours of work, educational requirements, physical requirements, job duties, geographical location, wages/earnings, and work environment. As well, they should continue to learn more general information about occupational demand and supply, industries or sectors employing various occupations, broad and specific labour market trends, and general economic trends. This is why HRDC is committed to producing annual updates to *Job Futures*.

How can each part of Job Futures 2000 be used for career/education planning?

World of Work: Overviews and Trends provides useful information for a variety of students and work searchers. For example:

- *Students* who want to compare the relative labour market conditions of the different levels of education and fields of study.
- *Job seekers* who want information about overall labour market conditions for professional occupations as compared to technical occupations.
- *Individuals re-entering the labour market* who want to learn more about new and emerging sectors, occupations and required skills that are not covered in detail in *Part 1.*
- *Persons considering a career change* who want to explore occupations with favourable outlooks across Canada.

One key message found in this part of *Job Futures 2000* is that an individual's labour market outcomes such as relative earnings or rates of unemployment improve if they have more education. In other words, a person with a high school diploma has more flexibility, options, and opportunities than a person with no diploma. Similarly, a person with post-secondary courses, certificates, diplomas, or degrees has better outcomes relative to a person with a high school diploma. The research also shows, however, that these general results can vary by person, occupation, field of study, region, and over time.

Part 1: Outlooks by Occupation offers detailed information for people with different types of needs. For example:

- *People interested in a particular occupation* can learn about the current and future labour market conditions that newcomers can expect to face.
- *People who are not sure what they want to do* can gather ideas on what types of occupations exist in Canada, or which occupations match their personal working styles.
- *People trying to target a work search* can learn which sectors employ the majority of workers in a particular occupation.
- *People with certain skills* can research occupations requiring their skills where they would be at an advantage relative to others.
- *People who want to know more about educational requirements for a particular occupation* can find cross-references to fields of study in *Part 2.*

Part 2: Outlooks by Field of Study provides useful information for people who have a particular field of interest or aptitude and would like to know more about occupations related to that field. For example:

- *People who want to target their work search* can find information on typical occupations of graduates from each field of study and the related labour market conditions that recent graduates are expected to face as they enter the world of work.
- *People looking for a career change* can learn about the movements of recent graduates within the first five years after graduation. They can also use the cross-references to *Part 1* for ideas about occupations related to their education.

The ***Job Futures Companion*** helps practitioners answer real-life, critical questions on employment and career issues, and guide clients to build LMI into their career planning process. Although written primarily for practitioners, the *Companion* can help any user wanting to get the most from *Job Futures 2000* by directing them to the appropriate parts where they can find information related to their specific questions. For example:

- *Secondary school students* who want to know why they should continue to study past high school;
- *Job seekers* who want to know which occupations offer the best chances of getting work without having to read each profile; and
- *University students* who want know what their chances are of getting a job after graduating from their specific field of study.

National and Provincial Versions of Job Futures

In addition to the national edition of *Job Futures 2000,* there are several provincial versions providing similar information about occupations and the labour market from a provincial perspective. References to these can be found in:

- *"Across Canada"* in the *World of Work—Overviews and Trends*; and
- *"For More Information"* in *Part 1* and *Part 2.*

What's New in Job Futures 2000?

Job Futures 2000, a suite of products from Human Resources Development Canada (HRDC), is a comprehensive reference tool designed to help Canadians make informed educational and occupational decisions, based on the latest data available.

Please note that Job Futures 2000 is available in print format and on the Internet.

In addition to providing updated data and revised occupational projections from the Canadian Occupational Projection System (COPS), *Job Futures 2000* includes several enhancements to both the print and Internet versions. As a result of suggestions received from various user surveys and focus groups with career and education counsellors and practitioners, teachers, job seekers, parents, and youth, HRDC has implemented the following improvements:

- **Title changes:** *Part 1,* previously *Occupational Outlooks,* is now titled *Outlooks by Occupation. Part 2,* previously *Career Outlooks for Graduates,* is now titled *Outlooks by Field of Study.*

- **A new product,** *World of Work: Overviews and Trends:* addresses topics critical to understanding Canada's labour market. It includes:
  - aggregate trends related to skill types, skill levels, education levels, and broad fields of study;
  - a summary of emerging occupations, sectors and skills within the Canadian labour market;
  - a view of occupations with favourable outlooks by province; and
  - information about potential lifetime earnings by occupation and expected net benefits of various levels of educational investment.

- **The *Job Futures Companion:*** Introduced in 1999, the *Companion* is a step-by-step guide to using *Job Futures 2000.* It is designed to act as a bridge between the important labour market information in *Job Futures 2000* and everyday issues that students and job seekers face in education and career planning. The practical format, using questions-and-answers and sample client scenarios, will help both practitioners and users.

- **New technology on the *Job Futures 2000* Web Site:** HRDC has incorporated a dynamic technology on the site that significantly improves its functionality. Since the technology creates comparison graphs or charts on request, users can now search and compare text or graphic information for up to five occupations or fields of study simultaneously. For example, people interested only in those occupations with low unemployment rates and above-average earnings can now select those variables and receive information on occupations that are limited to their criteria.

- **New linkages on *Job Futures 2000* Web site:**
  - This site now provides more visible links to provincial career information sites.
  - The search criteria on the site are now linked to the *National Occupational Classification* (NOC). This allows a user to search for over 25,000 sample job titles and be linked to the related occupation(s) profiled in *Job Futures 2000.*
  - Each occupational profile in *Job Futures 2000* now links directly to the corresponding occupation in the NOC database.

- **Enhanced earnings information:**
  - For comparison purposes, Part 1 now has enhanced earnings information that shows a range of earnings by selected ten-year age groups as well as overall averages. The age groups were chosen to reflect early, middle, and later periods in a career path.
  - For comparison purposes, *Part 2* now has enhanced graduates' earnings information that shows a range of earnings over time as well as by overall averages according to level of study. This information was derived from three different national graduate surveys.

- **A glossary of terms:** Definitions and explanations of economic, labour market and other terminology specific to *Job Futures 2000* has been added.

- **Improved indexes in the print version:**
  - *Part 1* now includes listings of occupational profiles alphabetically, by broad industrial grouping (NOC skill type), and by education and training levels (NOC skill level).
  - *Part 2* now includes listings of the field of study profiles alphabetically, by educational level and by broad field of study.

- **Improved design:** Text and graphics have been modified to be more visually appealing in both the print and Internet versions.

Understanding the Occupational Profiles

Coverage

Part 1 of *Job Futures 2000* provides information on 211 occupational groups, drawn from the National Occupational Classification (NOC). (See *"About the National Occupational Classification"* below). Of these, 137 are NOC minor occupational groups, which are coded with three digits. The other 74 are NOC unit groups, which are coded with four digits. The 137 three-digit occupational groups cover all employment in Canada, except military occupations.

Contents

Information on each occupational group includes:

- job duties and responsibilities
- the level and type of education, training and experience required of workers in the group
- main labour market characteristics of the group
- types of employers who hire workers in the group
- current prospects of finding work in occupations within the group
- work prospects over the coming years.

This information applies to the occupational group *only*, not to each individual occupational title within the group. Generally, jobs and types of work that have been grouped together share similar characteristics. It is possible, however, that:

- workers in a particular occupation within a group may experience *different* labour market conditions from those in other occupations in the same group; or
- some or all aspects of working in a particular occupation are different than those in other occupations in the group although the *same* conditions apply.

Where possible, such situations are described in the text.

About the Text

At Work

This section provides information about work experience in the occupational group. This information is adapted from the NOC's descriptions of occupations. In some instances, it has been modified as the result of consultations, held in the fall of 1999, with industry associations, professional groups, unions or sector councils.

- An opening statement identifies the types of employers who hire workers in the group and provides information on self-employment, when relevant.
- Facts presented in bulleted format are brief descriptions of the main work activities in the group. For some larger occupational groups, these work activities are grouped according to specific jobs.
- There may be an additional closing statement for groups that are comprised of many occupations. This statement lists job titles not mentioned elsewhere in the *"At Work"* section.

Education, Training and Experience

This section provides information on the employment requirements for an occupational group adapted from the NOC's descriptions of occupations. In some instances, it has been modified as the result of consultations, held in the fall of 1999, with industry associations, professional groups, unions or sector councils. While it does *not* provide an exhaustive description of all employment requirements, this section will provide general information about those requirements common to an occupational group.

This information includes:

- type and level of education
- specific training
- work experience
- licences
- certificates
- registration

This section also describes the educational qualifications of recent entrants for many occupational groups. This description is based on the educational levels of persons 15 to 29 years of age in the occupational group, as measured in the 1996 Census.

The section has two parts:

- The first bullet identifies the minimum level of education, training and experience that workers require for employment within an occupational group.
- Additional bullets provide specific requirements for all or some workers within that group.

In These Occupations…

This section provides information on general economic characteristics for an occupational group. There are generally eight bullets for three-digit occupational groups and seven bullets for four-digit groups. Each bullet completes the sentence "In these occupations…"

- ***The first bullet*** provides information about the size of the occupational group and employment trends. It offers a snapshot of the occupational group from 1988 to 1998, including:
  - The number of workers in the group in 1998. Occupations with high employment levels are likely to have a wider variety of job openings.
  - The overall percentage increase or decrease in the number of workers from 1988 to 1998, providing an indication of long-term growth or decline in the occupational group, as well as the percentage increase for each half of the decade, 1988 to 1993 and 1993 to 1993, providing an indication of recent trends.
  - A comparison with overall employment growth in the economy for the same periods to show whether growth in the occupational group is slow or fast. Occupations with rapid employment growth are likely to have more job openings available to labour market entrants.
- ***The second bullet***, for a three-digit occupational group *only*, gives the percentage distribution of employment for its related, four-digit occupational groups. This will help the reader gain a better understanding of the make-up of the three-digit occupational group. This bullet does not appear in the four-digit occupational profiles.
- ***The next three bullets*** cover part-time employment, self-employment and the proportion of women in the occupational group, and include a comparison with overall employment. When there is a significant difference, this is indicated as "well above" or "well below" average. As well, if the percentage of part-time, self-employed or female workers in the occupational group has risen more that five percentage points in the past 10 years, this is characterized as having "increased significantly." Conversely, if the percentage has fallen more than five percentage points, this is characterized as having "decreased significantly."

This type of information about recent trends will provide the reader with important knowledge about opportunities in the occupational group. For example:

- A low proportion of part-time employment may mean that the occupational group offers few opportunities for part-time work, while a high proportion may indicate more opportunities for part-time work, or it may mean full-time employment is more difficult to find.
- A high proportion of self-employment may be an indication of good opportunities for people who want to be their "own boss."
- A low proportion of women in an occupational group may indicate opportunities for women in non-traditional occupations, or that this occupation has not been attractive to women seeking work.

- ***The second-to-last bullet*** compares the unemployment rate in the occupational group to that for all occupations. (For more details, see *"About the Charts"*). If there is a significant difference, an unemployment rate will be described as "well above average" or "well below average." A high unemployment rate indicates limited chances of finding or keeping employment, while a low unemployment rate indicates relatively good chances of finding or keeping employment.

  Readers should note that, when making further comparisons on unemployment rates, they will get the most accurate contrast if they compare occupations with similar education and training requirements or those in a similar industry.
- ***The last bullet*** provides earnings levels in an occupational group as compared to earnings levels in other occupational groups in a similar industry or where workers have similar education and training requirements. If there is a significant difference, this is indicated as "well above average" or "well below average." Earnings levels provide an important indication of:
  - What job seekers might expect to be paid in the occupations within the group.
  - Labour market conditions since above-average earnings usually imply that employers are having difficulty in filling job openings. When this occurs, higher earnings are offered to attract qualified job seekers and may be seen as compensation for higher levels of training.
- ***An optional bullet*** will appear at the end of this section, for both three- and four-digit occupational groups, when employment in the group is highly sensitive to overall economic conditions. Readers will find this information useful as there is a likelihood of employment loss when overall economic conditions become unfavourable.

National Outlook to 2004

This section provides an evaluation of current labour market conditions in an occupational group, based on the most recent data available, i.e., 1998, augmented with more recent qualitative information, and how these conditions are expected to change through 2004.

Readers should note that these ratings describe the conditions in an occupational group at the national level *only*. Conditions may vary among the different four-digit occupations within a three-digit occupational group, or in different local and provincial labour markets.

- ***The first bullet*** describes current labour market conditions in the occupational group as providing *good, fair* or *limited* chances of finding stable employment with above-average earnings. This rating is followed by an explanation.

- ***The second bullet*** describes the change, or lack of change, in labour market conditions through 2004, and states whether chances of finding work in the occupational group will be *good, fair* or *limited* in 2004. This rating is followed by an explanation.
- ***The next bullet(s)*** describe specific developments that will influence labour market conditions, such as technological changes that affect the nature of work or required qualifications.
- ***An optional bullet*** provides the views, gathered in 1999, of an industry association, professional group, union or sector council on current or future labour market conditions for the occupational group.
- ***A final bullet*** discusses the principal sources of growth in labour requirements expected to occur in the occupational group through 2004, or states that employment requirements are either expected to decline or not expected to grow. This information provides valuable information to readers on what industries are likely to be hiring workers in the occupational group or, on the other hand, provides a warning that there is not likely to be much hiring of new entrants.

Definitions of Rating Terms

- ***Good*** means that chances of finding work are relatively strong, that chances of employment loss are relatively weak, and that earnings are relatively attractive.
- ***Fair*** means that these chances are neither *good* nor *limited.* For example, jobs may be more difficult to find, the probability of unemployment may be higher, or earnings may be lower than in comparable occupational groups that are rated *good.* Conversely, jobs may be easier to find, unemployment less likely, and earnings higher than in comparable occupational groups that are rated *limited.*
- ***Limited*** means that new entrants and re-entrants will have difficulty finding stable work and/or that earnings are not attractive relative to those in other occupations. For new entrants, such as school-leavers, i.e., graduates and drop-outs, and immigrants, *limited* usually means a low probability of finding permanent work and, if they find a job, relatively low earnings. For employed workers, *limited* will often mean a high probability of loss of work, a high probability of experiencing unemployment spells, and lower earnings.

A *limited* rating does not mean that people should avoid seeking employment in the occupation, but that their work search may be longer or more challenging than a similar work search in another occupational group.

How Ratings Are Determined

Current Rating

HRDC specialists develop current ratings by interpreting statistics relevant to the occupational group and base their evaluation on eight indicators. Five indicators are based on the unemployment rate for the group; three on year-round, full-time earnings for the group.

The five unemployment-rate-based indicators compare the group's unemployment rate to:

- the average level for all occupations
- the average level for occupations in the same NOC skill level
- the average level for all occupations in the same NOC skill type
- the unemployment rate in the group compared to its recent pattern
- the unemployment rate in the group evaluated in terms of its cyclical level

The earnings-based indicators compare average earnings of year-round, full-time workers in the group to:

- the average level for all occupations
- the average level for occupations in the same NOC skill level
- the average level for all occupations in the same NOC skill type

The rating system takes into account whether employment in the occupational group has decreased significantly over the last 10 years for which data are available.

The current rating may be adjusted based on feedback received through consultation, in the fall of 1999, with industry associations, professional groups, unions and sector councils, as well as other qualitative information.

Approximately 25 per cent of three-digit occupational groups have a current rating of *good,* 25 per cent have a current rating of *limited,* and the remaining 50 per cent have a current rating of *fair.*

Future Rating

HRDC specialists begin with the rating of the current situation in order to assess labour market conditions for an occupational group in 2004. If, over the 1999 to 2004 period, the COPS economic models project significantly more new job openings, due to new job creation and retirements, than the number of new job seekers, i.e., new school leavers, immigrants and occupational re-entrants, then labour market conditions are expected to improve. This may lead to the current rating being adjusted up one level, e.g., *fair* to *good.*

Alternatively, a significant excess of the number of new job seekers relative to the number of new job openings may result in deteriorating labour market conditions. In this case, the rating may be adjusted down one level, e.g., *fair* to *limited.*

As was the case for the current rating, the future ratings for occupational groups may have been modified as the result of the 1999 consultations with industry associations, professional groups, unions and sector councils, as well as other qualitative information.

Limitations of Ratings

The ratings of current and future labour market conditions for an occupational group are estimates based on available data, qualitative analyses and consultations with industry associations, professional groups, unions and sector councils. Because occupational labour markets adjust continuously to changing labour market conditions, and since external factors such as technological change and social and political conditions can evolve rapidly, information on labour market conditions requires frequent updates.

Also, since the ratings of current and future labour market conditions are estimates, they need to be revised as new data becomes available and are integrated into the COPS models. The detailed economic assumptions described in the COPS *1999 Reference Scenario* (see *"For More Information"*) were used to develop the projections of occupational labour market conditions for 2004. Changes in the scenario are one source of differences between projected labour market conditions in this edition and in earlier editions of *Job Futures.* More recent labour market data could be another source of such differences.

As stated above, these ratings describe the conditions in the occupational group at the national level *only.* Conditions may vary among the different occupations within an occupational group, and may be different in local or provincial labour markets.

About Data Sources and Estimates

Three objectives guide the choice of data sources used for *Job Futures 2000*:

- To provide accurate data.
- To provide data which is as current as possible.
- To provide the same information (as data or estimates) for all of the included occupational groups.

The principal data sources for *Job Futures 2000* are the Labour Force Survey (LFS) and the Survey of Consumer Finance (SCF). To improve the reliability of the data through increased sample size, the data are typically an average of the latest three years of data available from the LFS or the SCF. The three years used are the most recent available—1996 to 1998 for the LFS and 1995 to 1997 for the SCF. The SCF earnings figures were rounded.

In some instances, especially at the four-digit NOC level, 1996 Census data have been used to adjust LFS or SCF data because of their small sample sizes. These enhancements were generally required to derive the percentages of part-time workers, self-employed workers and female workers for four-digit occupational groups. As well, for certain occupational groups, HRDC specialists judged the earnings data obtained from the SCF to be inaccurate, due to difficulties with the occupational coding in the SCF. In these cases, earnings data from the 1996 Census were used. The Census earnings figures were not rounded.

The employment data for three-digit occupational groups come from the LFS. The employment estimates for four-digit occupational groups are COPS model estimates, which are derived from the LFS data for three-digit occupational groups and from detailed LFS and Census data.

In occupations in which there are certification requirements, the employment estimates in *Job Futures 2000,* which are based on the LFS, will not necessarily coincide with the number of employed persons with the appropriate certification. This is because the LFS, which classifies individuals as to occupation based on their description of their job title and job activities, does not ask about certification.

The unemployment rate estimates for four-digit groups were also adjusted using a combination of COPS economic model results and counts of Employment Insurance claimants.

Links to Related Information

Part 1 of *Job Futures 2000* may be a starting point for readers who are interested in detailed information on a particular occupational group. These profiles contain references or links to related occupations in *Part 1, Outlooks by Occupation* and related fields of study in *Part 2, Outlooks by Field of Study.*

Related Occupation(s)

In the Internet version, links to related occupations are found under the heading *Related Occupation(s).* In the print version, a list of *Related Occupation(s)* can be found in the header on the second page of each profile.

For occupations at the three-digit level, references are provided to any occupations at the four-digit level for which there is a separate occupational profile. These profiles will provide more detailed information on an important component of the broader, three-digit occupational group. For example, the description of the three-digit group, *Civil, Mechanical, Electrical and Chemical Engineers (NOC 213)*, includes a reference or link to the four-digit groups:

- ***Civil Engineers (NOC 2131)***
- ***Mechanical Engineers (NOC 2132)***
- ***Electrical and Electronics Engineers (NOC 2133)***

In the profiles of occupations at the four-digit level, a reference or link is provided to the broader, three-digit occupational grouping which includes these four-digit occupations. Readers may find that this provides useful information on labour market trends in a broader occupational context. For example, the related occupation(s) for each of the four-digit engineering occupations listed above includes a link to the three-digit group *Civil, Mechanical, Electrical and Chemical Engineers (NOC 213).*

Related Occupation(s): 0111, 0112
Part 2 Field of Study Cross-index: U120, U880, M120, U820, M820

NOC 011

Part 2 Field of Study Cross-index

A series of links to related fields of study appears under the heading of each profile in the Internet version and in the header on the second page of each profile in the print version.

These are the major fields of study described in *Part 2*, which are expected to supply graduates to that occupational group. In the field of study code:

- **T denotes a trade/vocational program**
- **C denotes a community college/Cégep career program**
- **U denotes an undergraduate university program**
- **M denotes a master's level university program**

An explanation of the coding structure for fields of study is provided in *"Understanding the Field of Study Profiles"* in *Part 2.*

National Occupation Classification (NOC) Code

The NOC code for each occupational group appears in the header on the second page of each profile in the print version, and following the occupational title at the beginning of each profile in the Internet version.

The NOC code provides information on the *skill type (broad industrial groupings)* and *skill level (educational and training level requirements)* of an occupational group. For more information on these codes, read *"About the National Occupational Classification (NOC)"* in this section.

The code is either a three-digit number for occupational minor groups or a four-digit number for occupational unit groups.

About the Charts

Where They Work

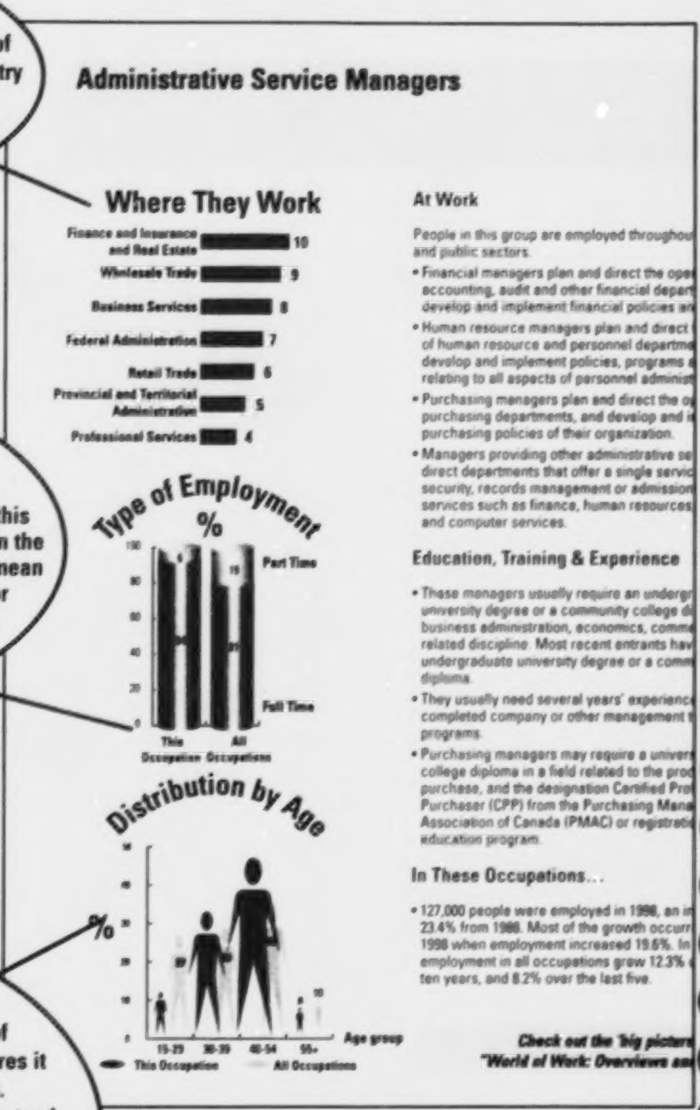
This graph gives the percentage distribution of employment in an occupational group by industry group. It indicates a maximum of seven key industries in which companies are likely to employ workers in the group.

Type of Employment

This chart gives the percentage distribution of persons employed in an occupational group between full-time workers and part-time workers, and compares this to the distribution of full-time and part-time employment in the economy. A low proportion of part-time employment may mean that the occupational group offers few opportunities for part-time work, while a high proportion may indicate more opportunities for part-time work, or it may mean full-time employment is more difficult to find.

Distribution by Age

This chart indicates the age distribution of workers in an occupational group and compares it to the age distribution for all occupations. Occupations with a relatively young work force tend to be entry-level occupations that are open to new entrants. However, in occupations with a high concentration of older workers, i.e., those that are less likely to be entry-level occupations, deaths and retirements may create employment opportunities for younger job seekers.


Where They Work
Finance and Insurance and Real Estate 10
Wholesale Trade 9
Business Services 8
Federal Administration 7
Retail Trade 6
Provincial and Territorial Administration 5
Professional Services 4
Type of Employment
%
100
80
60
40
20
0
6
19
Part Time
Full Time
This Occupation
All Occupations
Distribution by Age
%
50
40
30
20
10
0
15-29
30-39
40-54
55+
Age group
This Occupation
All Occupations

Administrative Service Managers

At Work

People in this group are employed throughou
and public sectors.

- Financial managers plan and direct the ope
accounting, audit and other financial depar
develop and implement financial policies an
- Human resource managers plan and direct
of human resource and personnel departme
develop and implement policies, programs
relating to all aspects of personnel adminis
- Purchasing managers plan and direct the o
purchasing departments, and develop and i
purchasing policies of their organization.
- Managers providing other administrative se
direct departments that offer a single servic
security, records management or admission
services such as finance, human resources
and computer services.

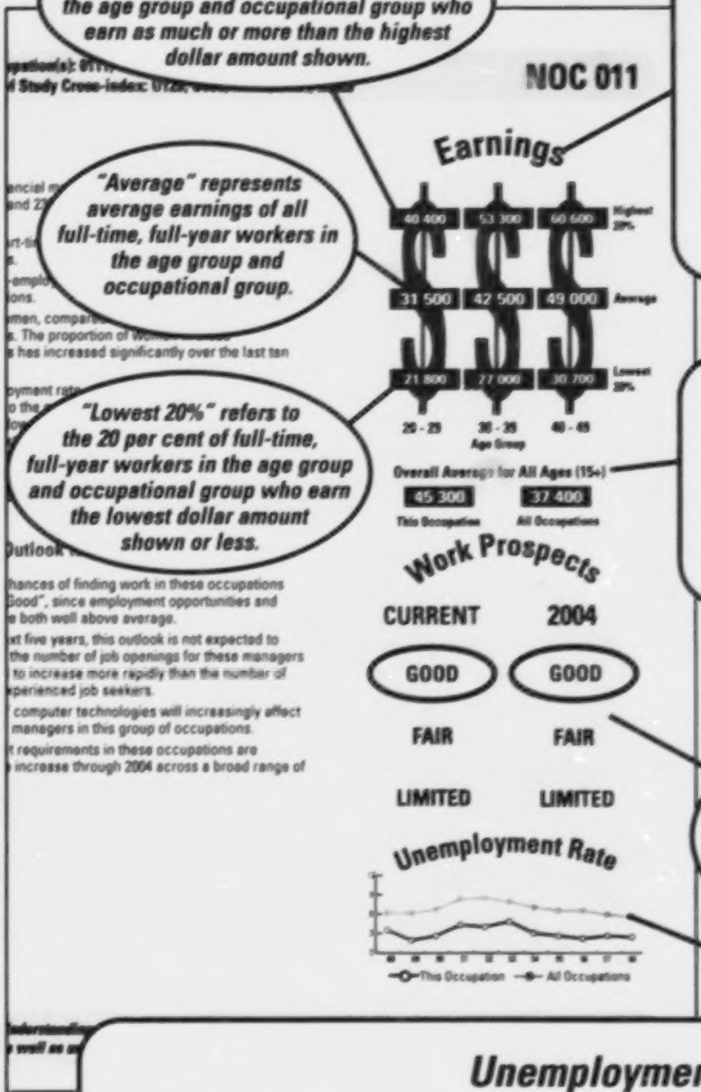
Education, Training & Experience

- These managers usually require an undergr
university degree or a community college d
business administration, economics, comm
related discipline. Most recent entrants hav
undergraduate university degree or a comm
diploma.
- They usually need several years' experienc
completed company or other management
programs.
- Purchasing managers may require a univer
college diploma in a field related to the prod
purchase, and the designation Certified Pro
Purchaser (CPP) from the Purchasing Mana
Association of Canada (PMAC) or registrati
education program.

In These Occupations...

- 127,000 people were employed in 1998, an i
23.4% from 1988. Most of the growth occurr
1998 when employment increased 19.6%. In
employment in all occupations grew 12.3%
ten years, and 8.2% over the last five.

Check out the 'big picture
"World of Work: Overviews an


NOC 011
Earnings
40 400
53 300
60 600
Highest 20%
31 500
42 500
49 000
Average
21 800
27 000
30 700
Lowest 20%
20 - 29
30 - 39
40 - 49
Age Group
Overall Average for All Ages (15+)
45 300
37 400
This Occupation
All Occupations
Work Prospects
CURRENT
2004
GOOD
GOOD
FAIR
FAIR
LIMITED
LIMITED
Unemployment Rate
This Occupation
All Occupations

Earnings

This graphic provides occupational-group information on the 1997 earnings of full-time, full-year workers in three different age groups. Although the data may appear dated, it is the most recent available and is useful when making relative comparisons to other occupations. The age groups — 20 to 29, 30 to 39 and 40 to 49 — were chosen to approximate the career path of workers at three different stages: entry-level, mid-career and peak.

"Highest 20%" refers to the 20 per cent of full-time, full-year workers in the age group and occupational group who earn as much or more than the highest dollar amount shown.

"Average" represents average earnings of all full-time, full-year workers in the age group and occupational group.

"Lowest 20%" refers to the 20 per cent of full-time, full-year workers in the age group and occupational group who earn the lowest dollar amount shown or less.

For comparison, the average annual earnings of all full-time, full-year workers in the occupational group and in all occupations are given.

Full-time, full-year earnings do not include other forms of compensation such as retirement benefits, stock options or expense accounts, but do include net self-employment income.

Work Prospects

The circles in this chart illustrate the current (1998) and future (2004) outlooks for finding work, rated as *good, fair* or *limited*. These ratings correspond to the description provided in each profile in the section *National Outlooks to 2004*. (Also see section above "*How Ratings are Determined*".)

Unemployment Rate

This chart gives the unemployment rates for the occupational group and compares it to that for all occupations, from 1988 to 1998. The unemployment rate for all occupations includes, as unemployed, only those unemployed persons who also held employment within the past twelve months, because they can be classified to an occupation. The result is that the unemployment rate in *Job Futures 2000* is considerably lower than that for the entire labour force which is often the one reported in the media. The latter includes, as unemployed, both unemployed persons who held employment in the last twelve months, and those who did not but were seeking employment.

An unemployment rate for "This Occupation" that is above the average for "All Occupations" suggests that a new job seeker could expect to have difficulty in finding stable employment. A consistently above-average unemployment rate, i.e., from 1988 to 1998, indicates that this problem is not simply the result of one bad year and further highlights weak employment opportunities.

About the National Occupational Classification (NOC)

The NOC classifies and describes more than 25,000 occupations in the Canadian labour market. These occupations are categorized into three levels:

- 26 major groups
- 139 minor groups
- 522 unit groups

The 26 major groups are identified by two-digit numbers. Some examples are code 11, Professional Occupations in Business and Finance; code 32, Technical and Skilled Occupations in Health; and code 86, Labourers in Primary Industry. These groups are then further broken down into minor groups.

The 139 minor groups, all of which are included in *Job Futures 2000* except for military occupations, are identified by three-digit numbers. Some examples are code 513, Creative and Performing Artists; code 621, Sales and Service Supervisors; and code 761, Trades Helpers and Labourers. These groups, in turn, are further broken down into unit groups.

The 522 unit groups, 74 of which have been chosen to be included in *Job Futures 2000*, are identified by four-digit numbers and provide the detailed information found in the NOC occupational descriptions. Each four-digit group has information on employers, sample occupational titles, main duties, employment requirements and any pertinent additional information. Some examples are code 1232, Loan Officers; code 5253, Sports Officials and Referees; and code 7266, Blacksmiths and Die Setters.

Part 1 of *Job Futures 2000* includes 137 three-digit and 74 four-digit occupational groups. Some of the three-digit groups comprise information on two or more four-digit occupations which are indicated in *"Related Occupation(s)"* as described above. Certain four-digit occupations are included because they provide readers with additional information on occupations for which HRDC specialists had specific knowledge regarding market prospects.

How to Interpret the NOC Code

The first digit refers to the Skill Type Category:

1. *Business, Finance and Administrative Occupations*
2. *Natural and Applied Sciences and Related Occcupations*
3. *Health Occupations*
4. *Occupations in Social Science, Education, Government Service and Religion*
5. *Occupations in Art, Culture, Recreation and Sport*
6. *Sales and Service Occupations*
7. *Trades, Transport and Equipment Operators*
8. *Occupations in Primary Industry*
9. *Occupations in Processing, Manufacturing and Utilities*

Occupation(s): 1121, 1122
ield of Study Cross-index: U120, M120, C121, U880

NOC 112

The second digit refers to the Skill Level Category:

1. *Skill Level A (Professional Occupations)*
2 or 3. *Skill Level B (Technical, Paraprofessional and Skilled Occupations)*
4 or 5. *Skill Level C (Intermediate Occupations)*
6. *Skill Level D (Labouring and Elemental Occupations)*

NOC SKILL LEVEL CRITERIA - Education/Training

Skill Level A

University degree, e.g., bachelor's, master's or post-graduate

Skill Level B

- *Two to three years of post-secondary education at community college, Cégep or trade/vocational school*
- *Two to four years of apprenticeship training*
- *Three to four years of secondary school and more than two years of on-the-job training, training courses or specific work experience*

Also includes:

- *Occupations with significant health and safety responsibilities, e.g., firefighters, police officers and registered nursing assistants (licensed/practical nurses)*
- *Occupations with supervisory responsibilities*

Skill Level C

- *One to four years of secondary school education*
- *Up to two years of on-the-job training, external training courses or specific work experience*

Skill Level D

- *Up to two years of secondary school and short work demonstration or on-the-job training*

Important Note:

This structure applies to all occupations except management occupations. For management, the first digit is "0" and the second digit represents the skill type categories, from 1 to 9, as described above.

For More Information

Job Futures 2000 is one of many sources of labour market information for Canadians. Complementary publications offering comprehensive information on training and education, career planning, counselling and occupations are also available. The following list is a sample of some useful sources that the reader may like to reference, including:

- **Provincial/Regional Versions of Job Futures**
- **Related Sites – Occupational, Labour Market and Career Information**
- **Local Labour Market Information**
- **HRDC – Related Publications**
  - **– Occasional Publications**
- **Other Relevant Sites**
- **Additional Career Information**

Provincial/Regional Versions of Job Futures

Provincial education or labour departments, as well as the national and regional offices of Human Resources Development Canada (HRDC), are partners in the Canadian Occupational Projection System (COPS). Most jurisdictions produce, often in collaboration, current and future information on occupations, several of which are provincial versions of Job Futures. These are listed below.

[illegible]	[illegible]
Prince Edward Island	**www.pei.jobfutures.org**
New Brunswick	**www.nb.hrdc-drhc.gc.ca/New_Brunswick/common/lmi/jobf/nofrmj_e.html**
Quebec	**www.qc.hrdc-drhc.gc.ca/job-futures** -- Scheduled to be updated on an on-going basis, beginning mid-October 1999.
Ontario	**www.on.hrdc-drhc.gc.ca/english/lmi/eaid/occ.info/ojf/jobf_e.html** - Provides access to *Ontario Job Futures* which is scheduled to be updated in the Spring of 2000. **www.edu.gov.on.ca/eng/career/labmark.html**: Also provides access to *Ontario Job Futures.*
Saskatchewan	**www.sk.hrdc-drhc.gc.ca/lmi/en/menu/00000e.shtml** - An occupational outlook to 2002.
Alberta/NWT	**www.ab.hrdc-drhc.gc.ca/lmi/main/futures.htm** – Provides access to *Alberta Job Futures, 1995 to 2001.* **www.alis.gov.ab.ca** - Also provides access to *Alberta Job Futures, 1995 to 2001.*
British Columbia	**www.workfutures.bc.ca** - Provides access to *B.C. Work Futures'* site, scheduled to be updated in April 2000.
Yukon	**www.workfutures.yk.ca**

Many HRDC COPS partners do not produce a 'Job Futures', but do provide similar occupational information as well as other career and labour market information material, at provincial and local levels. This information can be accessed through the web sites listed below.

Related Sites – [illegible] Career Information

Newfoundland	www.nf.hrdc-drhc.gc.ca - General labour market information, including occupational profiles. www.gov.nf.ca – Includes publications *Career Search 1999* and *Post-secondary Indicators.*
Prince Edward Island	www.gov.pe.ca/infopei/index.php3 - *see sections "Education and Learning" and "Statistics".*
Nova Scotia	www.ns.hrdc-drhc.gc.ca/english/index.htm www.ednet.ns.ca/educ/career/ - Includes *Career Options: an Occupational Handbook for Nova Scotians.*
New Brunswick	www.gov.nb.ca/dol-mdt/lma/product.htm - Includes *Occupational Profiles*; *Snapshot of the New Brunswick Labour Market* (hard copy also available); *Handbook of Labour Market Information* (update in 2000); and *Employer Survey* (December 1999).
Quebec	www.mss.gouv.qc.ca/mes/doc/Emplqc/imt.htm - Includes *Information sur l'éducation,la formation et les établissements de formation*; *Données et analyses sur l'intégration des finissants des systèmes d'enseignement et de formation*; *Analyses de la conjoncture économique et du marché du travail;* et *Perspectives du marché du travail au Québec 1999-2000.*
Ontario	www.edu.gov.on.ca/eng/career/ - Includes *Career Gateway* (career exploration, job-search skills, education/training information.) www.equalopportunity.on.ca/enggraf/more/trades.html - Provides information on access to professions and trades.
Manitoba	www.mb.hrdc-drhc.gc.ca/menu/lmi.shtml - Includes local labour market information. www.edu.gov.mb.ca/tce/carjob/occ_car_info/occ_car_info.html - Includes *High Demand Occupations in Manitoba* (1999); *Occupations with Active Recruitment*; *Industrial and Occupational Profiles;* and *Career Planning Guide.*
Saskatchewan	www.sasknetwork.gov.sk.ca - Includes career, employment and labour market information.
Alberta/NWT	www.alis.gov.ab.ca/ - Includes a summary document of *Alberta Careers Beyond 2000* (scheduled to be updated in the Spring of 2000).
British Columbia	www.ceiss.org – Includes *Job Destinations of Former College and Institute Students: Analysis by Institutions; Survey Results by Program for Former College and Institute Students; Indicators for B.C. Colleges and Institutes: Analysis by Institution; B.C. University Graduates Outcomes;* and *Private Training Outcomes Survey.* www.workinfonet.bc.ca – Provides access to *B.C. Work Futures*, and other resources such as *WorkScene: B.C. Work Futures for Youth*; *A Guide to the B.C. Economy and Labour Market*; and *What's Key in Labour Market Information in B.C.*

Readers are also encouraged to contact their provincial ministry of education or labour, or a HRDC regional office or resource centre in their area for additional resources and related information.

Local Labour Market Information

HRDC's National Labour Market Information Service site provides access to general and detailed information on local labour markets across Canada: **http://lmi-imt.hrdc-drhc.gc.ca**

HRDC – Related Publications

- The National Occupational Classification (NOC) describes occupations, employment and licensing requirements in Canada. Electronically available at Web address: **www.hrdc-drhc.gc.ca/noc**
- NOC *Career Handbook* details career counselling information based on occupational groups in the NOC. Electronically available at Web address: **www.hrdc-drhc.gc.ca/noc**
- *Career Considerations* provides a wall chart and accompanying brochures on 19 occupational groups.
- *Career Moves* is a series of booklets on labour market trends and job opportunities in different sectors of the economy.
- *Career Directions* details information about 160 jobs that do not require a university education.
- *Canada Prospects* gives career information for all Canadians in an annually published tabloid format. Electronically available at Web address: **www.careerccc.org/english/showcase/index_e.htm**
- *InterOptions* is an interactive software program that helps users match their interests to different careers.
- The *Ellis Chart* details information on provincial and territorial apprenticeship programs.
- HRDC and Industry Canada have identified a number of emerging sectors, considered to be high growth areas. Overviews of some of these emerging sectors are available at the following Web address: **www.hrdc-drhc.gc.ca/sector/profiles/emerging.shtml.**
- HRDC provides information about labour market issues and how they relate to various industry sectors in Canada. Electronic access to these studies is available at: **www.hrdc-drhc.gc.ca/sector/home.shtml.**

Readers who want more information on these publications or products should contact:

Human Resources Partnerships Directorate
140 Promenade du Portage
Place du Portage
Phase IV, 5th Floor
Hull, Quebec K1A 0J9
Fax: (819) 953-8700

HRDC – Occasional Publications

- The *School Leavers Survey* examines high school graduates and school leavers with respect to their school experience, academic performance, part-time employment, labour market and changes to lifestyle.
- The *National Apprenticeable Trades Survey* looks at the social characteristics of apprentices, their labour market experiences, the match between training and occupations, and factors leading to non-completion of trade programs.
- The *National Graduates Survey* (NGS) examines such areas as the employment status, occupations, earnings and job satisfaction of university, community college and trade/vocational graduates two years after graduation.
- The *Follow-up Survey of Graduates* re-examines the experience of the graduates surveyed in the NGS five years after graduation, providing more information on their career progressions.
- The *Adult Education and Training Survey* reports on the learning activities of adults once they have completed their formal education with a special focus on job-related learning.
- From HRDC's Applied Research Branch, the *Canadian Occupational Projection System, 1999 Macroeconomic Reference Scenario, T-99-1E.* For more information on this publication only, visit: **www.hrdc-drhc.gc.ca/arb/publications/research/alph.shtml#cc;** or contact: **research@spg.org**; fax: 819-953-9077.
- A detailed inventory of other publications related to a variety of labour market research topics can be accessed via HRDC's Applied Research Branch Web site: **www.hrdc-drhc.gc.ca/arb/publications/research/research.shtml.**

More information on these publications and products is available from:

Public Enquiries Centre
Communications Branch
Human Resources Development Canada
Hull, Quebec K1A 0J9
Fax: (819) 953-7260

These publications are also available electronically at: **www.hrdc-drhc.gc.ca/arb/publications/books.**

Other Relevant Sites

- Canada's WorkinfoNET is a free on-line gateway site providing links to numerous career, labour market and education information sites as well as links to provincial, regional and local sites:
  - **www.workinfonet.ca**
- Industry Canada's Web site may be useful for more information on economic and industrial trends and links to other relevant sites.
  - **http://strategis.ic.gc.ca**
- SchoolNet is a free on-line source for information on education:
  - **www.schoolnet.ca**

The following educational associations can also provide relevant information:

Association of Canadian Community Colleges (ACCC)
1223 Michael Street, Suite 200
Ottawa, Ontario K1J 7T2
Fax: (613) 746-6721
Internet: www.accc.ca

Association of Universities and Colleges of Canada (AUCC)
350 Albert Street, Suite 600
Ottawa, Ontario K1R 1B1
Fax: (613) 563-9745
E-mail: info@aucc.ca
Internet: www.aucc.ca

Additional Career Information

Below are a few examples of other resources and sites which may be useful for the career planning process.

- ***Self-Assessment/Self-Exploration***

Keirsey Temperament:
www.keirsey.com
Myers-Briggs General Information:
www.teamtechnology.co.uk/
Career Questionnaire :
http://cbweb9p.collegeboard.org/career/html/searchQues.html
Careers Interest Quiz:
www.schoolfinder.com/career/carquiz.htm

- ***Career Exploration***

Work Search:
worksearch.gc.ca
Youth Resource Network of Canada:
youth.gc.ca/menu_e.shtml

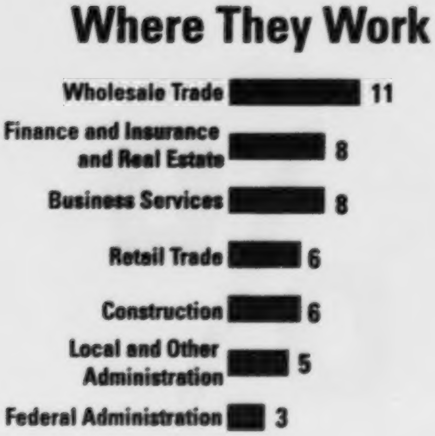
- ***Guidance/Career Counsellors***

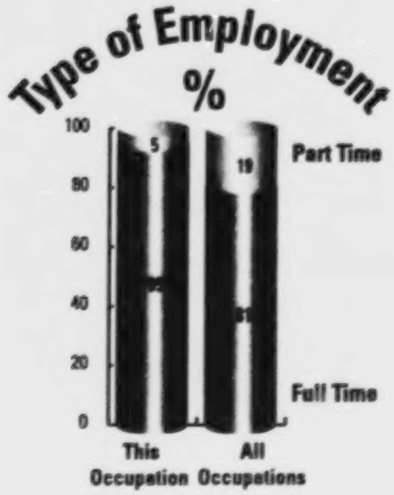
HRDC: Counsellor Resource Centre:
www.worksearch.gc.ca/crc
Contact Point:
www.contactpoint.ca
Canada Career Consortium:
www.careerccc.org

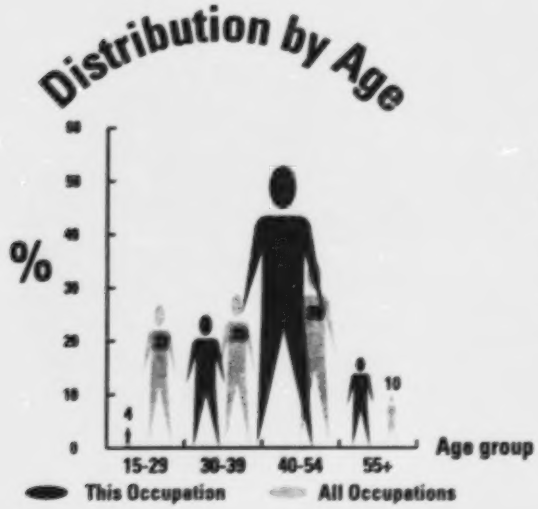
Job Futures 2000

Occupational Profiles

Legislators and Senior Managers







At Work

Legislators and senior government managers and officials work at the national, provincial, territorial and local levels of government. Senior managers outside government are employed throughout the private sector.

- Legislators enact, amend or repeal laws and regulations at the federal, provincial, territorial and local levels of government.
- Senior government managers and officials plan, organize, direct and control the major activities of government departments, boards, agencies and commissions. They establish the direction of their organizations according to policies made by elected officials and legislative bodies.
- Senior managers (other than government) plan, organize, direct and control the major activities of their organizations. Working alone or with a board of directors, they establish policies to direct their organizations.

Education, Training & Experience

- People in this group have different educational requirements, depending on their position. Most recent entrants have a high school diploma or an undergraduate university degree.
- Legislators are elected or appointed.
- Senior government managers and officials usually require a university degree or college diploma and several years' general managerial experience. They may also need a graduate degree in a related field.
- Senior managers (other than government) usually have a university degree or college diploma in a specific or a related discipline, as well as several years' managerial experience related to their area of work. They may need to specialize in a particular area and obtain a professional designation.

In These Occupations...

- 144,000 people were employed in 1998, an increase of 4.8% from 1988. However, after rising 11.3% over the 1988 to 1993 period, employment decreased 5.8% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.

Check out the 'big picture' in "World of Work: Overviews and Trends"

- 30% are senior managers in goods production, utilities, transportation and construction; 25% are senior managers in trade and broadcasting; and 20% are senior managers in financial, communications and other business services.
- 5% work part-time, well below the average of 19% for all occupations.
- 33% are self-employed, well above the average of 17% for all occupations.
- 21% are women, well below the average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 2% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are comparable to those for other managerial occupations.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities and earnings are both well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings for these managers is expected to be matched by the number of qualified, experienced job seekers.
- Competition for senior management jobs is expected to be intense, as a large number of middle managers in an aging work force seek to move into senior positions.
- Much of the increase in employment requirements through 2004 in these occupations is expected to occur in the business services, construction and wholesale trade industries.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	40 500	57 800	64 700
Average	31 800	43 300	50 900
Lowest 20%	15 700	18 500	20 300

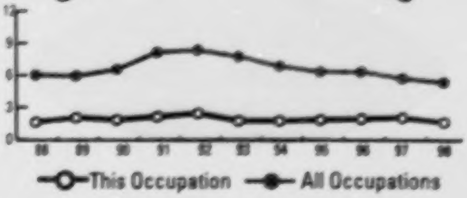
Overall Average for All Ages (15+)

This Occupation	All Occupations
46 800	37 400

Work Prospects

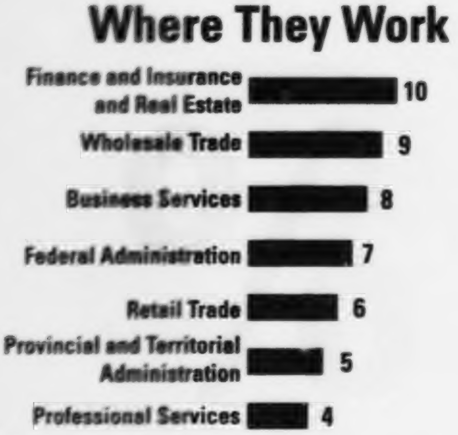
CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

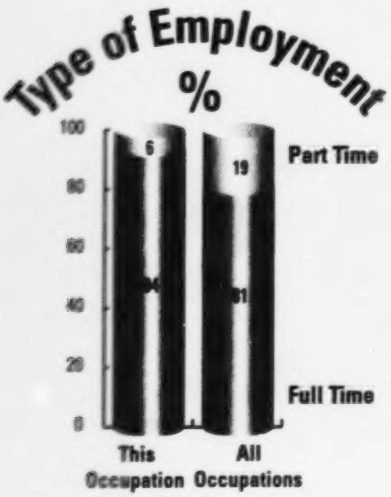
Unemployment Rate

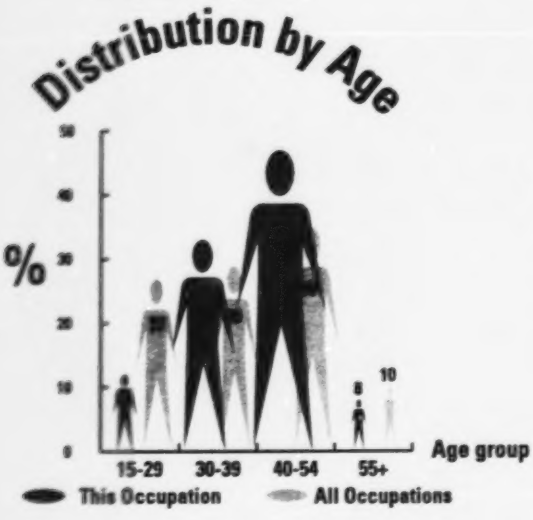


Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Administrative Service Managers







At Work

People in this group are employed throughout the private and public sectors.

- Financial managers plan and direct the operations of accounting, audit and other financial departments, and develop and implement financial policies and systems.
- Human resource managers plan and direct the operations of human resource and personnel departments, and develop and implement policies, programs and procedures relating to all aspects of personnel administration.
- Purchasing managers plan and direct the operations of purchasing departments, and develop and implement the purchasing policies of their organization.
- Managers providing other administrative services plan and direct departments that offer a single service such as security, records management or admissions, or several services such as finance, human resources, purchasing and computer services.

Education, Training & Experience

- These managers usually require an undergraduate university degree or a community college diploma in business administration, economics, commerce or a related discipline. Most recent entrants have an undergraduate university degree or a community college diploma.
- They usually need several years' experience and have completed company or other management training programs.
- Purchasing managers may require a university degree or college diploma in a field related to the products they purchase, and the designation Certified Professional Purchaser (CPP) from the Purchasing Management Association of Canada (PMAC) or registration in the PMAC education program.

In These Occupations...

- 127,000 people were employed in 1998, an increase of 23.4% from 1988. Most of the growth occurred from 1993 to 1998 when employment increased 19.6%. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 0111, 0112
Part 2 Field of Study Cross-index: U120, U880, M120, U820, M820

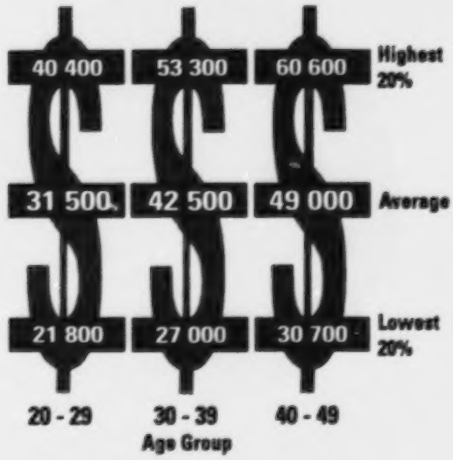
NOC 011

- 44% are financial managers; 26% are human resources managers; and 23% are other administrative services managers.
- 6% work part-time, well below the average of 19% for all occupations.
- 5% are self-employed, well below the average of 17% for all occupations.
- 52% are women, compared to an average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 2.4% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations in the business, finance and administration sectors.
- the average earnings are comparable to those for other managerial occupations but are among the highest for occupations in the business, finance and administration sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities and earnings are both well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings for these managers is expected to increase more rapidly than the number of qualified, experienced job seekers.
- Adoption of computer technologies will increasingly affect the work of managers in this group of occupations.
- Employment requirements in these occupations are expected to increase through 2004 across a broad range of industries.

Earnings



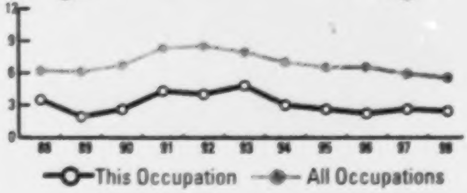
Overall Average for All Ages (15+)

45 300	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

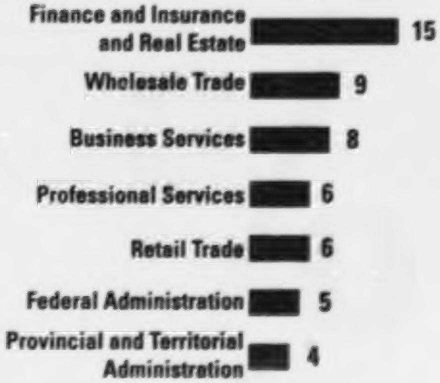
Unemployment Rate

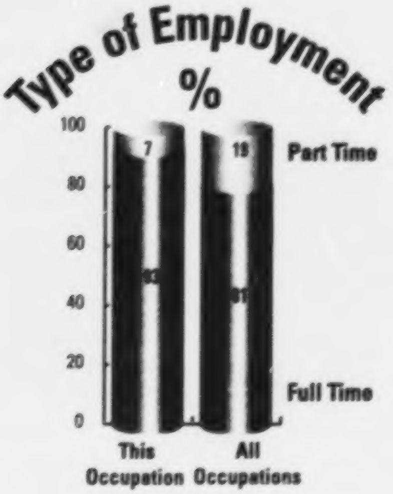


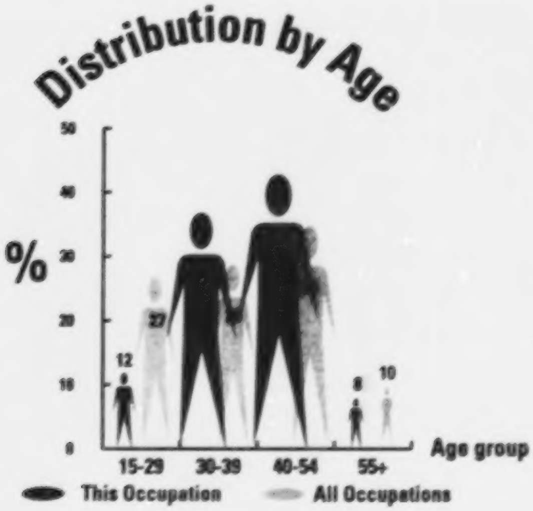
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Financial Managers

Where They Work







At Work

These managers plan, organize, direct and control the operations of accounting, audit and other financial departments in the private sector and government. Their duties require them to:

- develop and implement financial policies, systems and procedures;
- prepare, or co-ordinate the preparation of, financial statements, estimates, summaries and other financial analyses and management reports;
- take part in strategic decision making, including the setting of long-term goals, development of organizational and financing strategies, and decisions regarding products, services or programs as well as mergers and acquisitions;
- evaluate financial reporting, accounting and investing systems and make recommendations for changes to senior management; and
- participate in teams involved in marketing, design and development, procurement, process engineering, manufacturing and accounting.

Education, Training & Experience

- People in this group usually have a university degree, an accounting designation or a college diploma in business administration, economics, commerce or a related field. Most recent entrants have an undergraduate university degree or a community college diploma.
- They may also be required to complete a company or other management training program.
- They also need several years' experience in accounting, auditing, budgeting, financial planning and analysis or another financial activity.
- They may require a recognized accounting designation such as CGA (Certified General Accountant), CA (Chartered Accountant) or CMA (Certified Management Accountant).
- With experience, they may advance to senior management positions in financial management.

In These Occupations...

- 56,000 people were employed in 1998, an increase of 31.5% from 1988. This reflects an increase of 14.9% from 1988 to

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 011
Part 2 Field of Study Cross-index: U120, M120, U820

NOC 0111

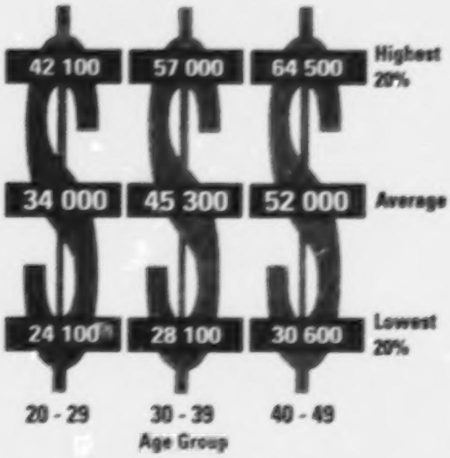
1993 and 14.4% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.

- 7% work part-time, well below the average of 19% for all occupations.
- 11% are self-employed, compared to an average of 17% for all occupations.
- 51% are women, compared to an average of 45% for all occupations. The proportion of women in this occupation has increased significantly over the last ten years.
- the unemployment rate averaged 1.5% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for management occupations and for occupations in the business, finance and administration sectors.
- the average earnings are comparable to those for other management occupations but are among the highest for occupations in the business, finance and administration sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since employment opportunities and earnings are both well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings for these managers is expected to increase more rapidly than the number of qualified, experienced job seekers.
- In an era of computerized financial reporting and management systems, financial managers need strong information systems skills.
- Employment requirements for this occupation are expected to increase through 2004 across a broad range of industries.

Earnings



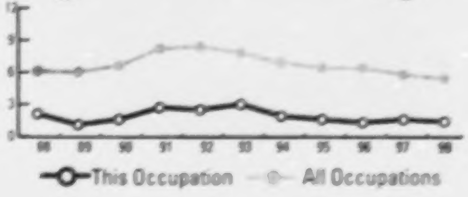
Overall Average for All Ages (15+)

This Occupation	All Occupations
47 700	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

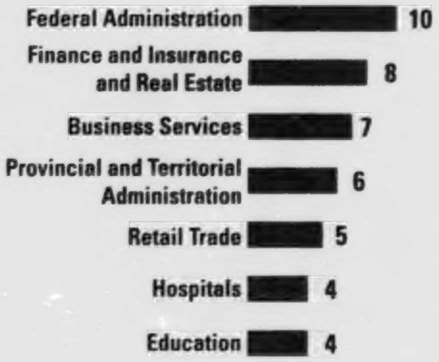
Unemployment Rate

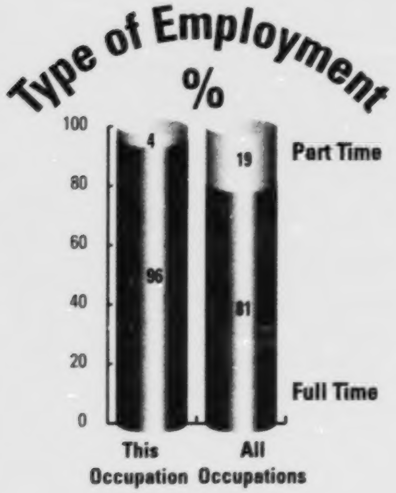


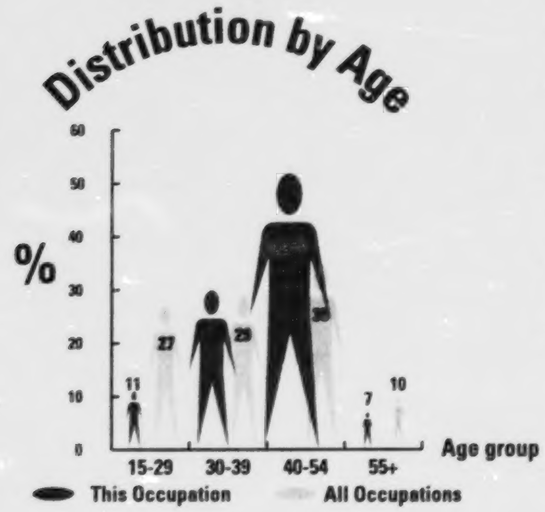
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Human Resource Managers

Where They Work







At Work

These managers plan, organize, direct and control the operations of human resource and personnel departments in the private sector and government. Their duties may require them to:

- plan the human resource needs of an organization by consulting with other managers;
- coordinate training and recruiting;
- develop and implement labour relations policies and procedures, and negotiate collective agreements;
- administer employee development, language training and health and safety programs;
- oversee the classification and rating of occupations;
- organize and conduct employee information meetings on employment policy, benefits and compensation; and
- advise other departmental managers on interpretation and administration of personnel policies and programs.

Education, Training & Experience

- Human resource managers must either have a university degree in a field related to personnel management, such as business administration, industrial relations, commerce or psychology, or complete a professional development program in personnel administration. Many recent entrants have an undergraduate university degree.
- They must also have several years' experience as a personnel officer or human resource specialist.
- With experience, they may advance to senior management positions.

In These Occupations...

- 33,000 people were employed in 1998, a decrease of 1.0% from 1988. However, after declining 23.4% over the 1988 to 1993 period, employment increased 29.2% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 4% work part-time, well below the average of 19% for all occupations.
- 1% are self-employed, well below the average of 17% for all occupations.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 011
Part 2 Field of Study Cross-index: U120, U240, U870, C121

NOC 0112

- 57% are women, well above the average of 45% for all occupations. The proportion of women in this occupation has increased significantly over the last ten years.
- the unemployment rate averaged 1.8% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for management occupations and for occupations in the business, finance and administration sectors.
- the average earnings are comparable to those for other management occupations but among the highest for occupations in the business, finance and administration sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since employment opportunities and earnings are both well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings for these managers is expected to increase more rapidly than the number of qualified, experienced job seekers.
- Managers in this area will be increasingly involved in implementing and using computerized human resource management systems. This will require strong information systems skills.
- Employment requirements for this occupation are expected to increase through 2004 across a broad range of industries.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	39 300	51 300	60 700
Average	31 200	41 600	49 500
Lowest 20%	22 000	28 000	34 000

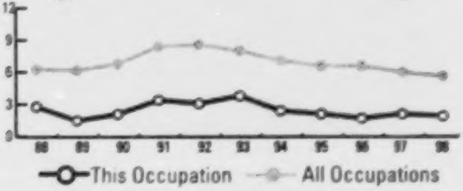
Overall Average for All Ages (15+)

This Occupation	All Occupations
45 600	37 400

Work Prospects

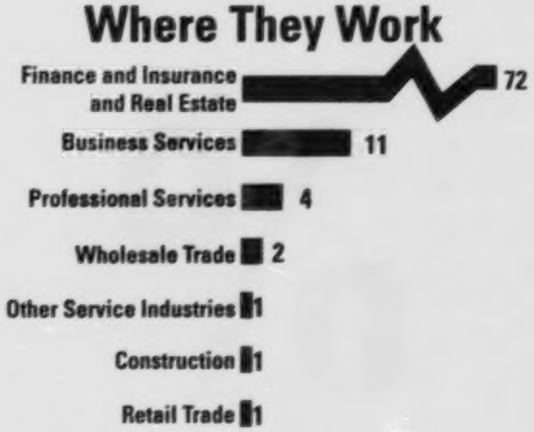
CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

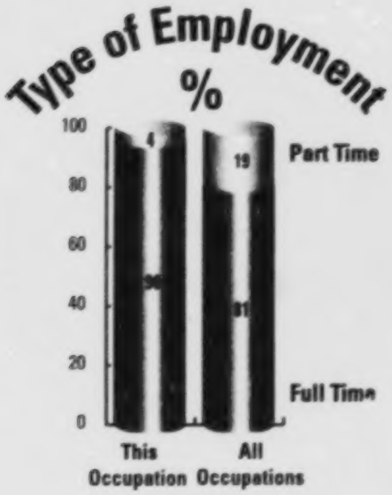
Unemployment Rate

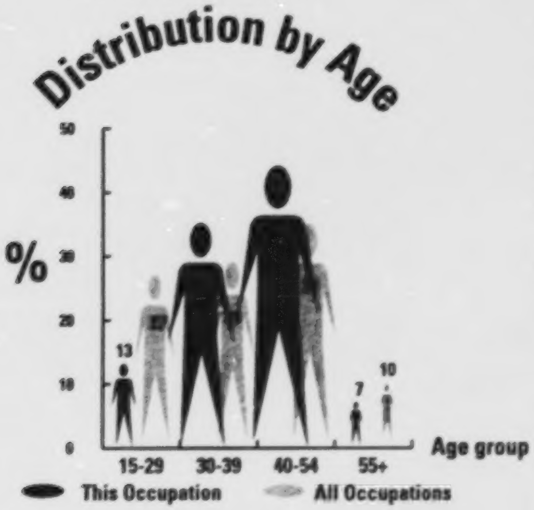


Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Managers in Financial and Business Services







At Work

People in this group work in financial institutions, such as insurance and real estate firms, stock and mortgage brokerages, investment firms, security and commodity exchanges, banks and credit departments, and in marketing research and advertising firms.

- Insurance managers plan and direct the activities of organizations that sell auto, fire, life and other insurance, as well as health and financial services and products.
- Real estate managers plan and direct the activities of organizations engaged in the sale, purchase, lease and property management of residential, commercial, industrial and other properties.
- Mortgage brokerage managers plan and direct the activities of organizations that find lenders and lending institutions on behalf of clients.
- Securities managers plan and direct the activities of organizations that buy and sell stocks, bonds and other investments on behalf of clients.
- Banking managers plan and direct branch operations or departments of banks, trust companies, credit unions and similar institutions.
- Credit managers plan and direct the activities of credit departments within industrial and commercial establishments.
- Business services managers plan and direct the activities of organizations such as market research and management consulting firms and personnel, advertising and other business services.

Education, Training & Experience

- These managers usually possess a university degree or college diploma in business administration, economics or another field related to the business service they provide. Most recent entrants have an undergraduate university degree or a community college diploma.
- They usually require several years' experience.
- They may need management experience and completion of company or other management training programs.
- Some managers may also have to obtain professional licences, certification or registration.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: U120, M120, U820, M820

NOC 012

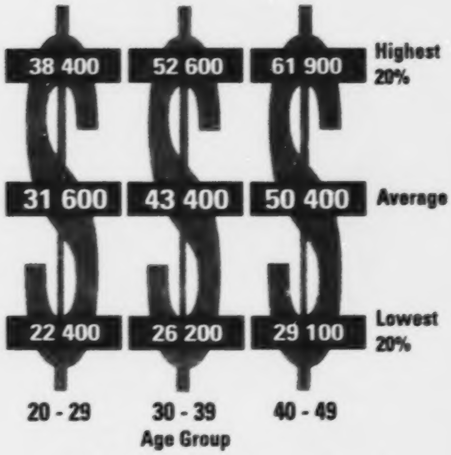
In These Occupations...

- 105,000 people were employed in 1998, an increase of 36.4% from 1988. After employment gains of 23.4% from 1988 to 1993, employment growth slowed to 10.5% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 56% work as banking, credit and other investment managers and 30% work as insurance, real estate and financial brokerage managers.
- 4% work part-time, well below the average of 19% for all occupations.
- 7% are self-employed, well below the average of 17% for all occupations.
- 54% are women, compared to an average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 2.2% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations in the business, finance and administration sectors.
- the average earnings are comparable to those for other managerial occupations but are among the highest for occupations in the business, finance and administration sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities and earnings are both well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings for these managers is expected to be matched by the number of qualified job seekers.
- Technological change has raised the skill requirements for this group, as computerized financial systems, automatic teller machines and real estate listing services are widespread in the finance, insurance and real estate industry.
- Telecommunications technologies are also changing the speed, volume and complexity of the information that financial managers must analyse to make decisions.
- Most of the increase in employment requirements through 2004 in these occupations is expected to occur in the financial, insurance and real estate and business services industries.

Earnings



Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	38 400	52 600	61 900
Average	31 600	43 400	50 400
Lowest 20%	22 400	26 200	29 100

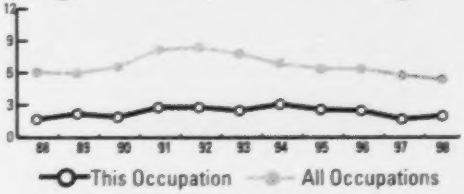
Overall Average for All Ages (15+)

This Occupation	All Occupations
46 500	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

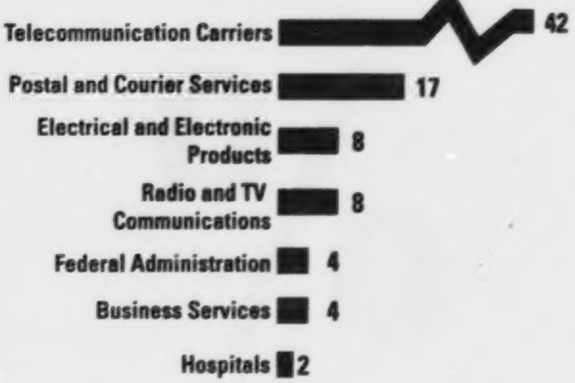
Unemployment Rate



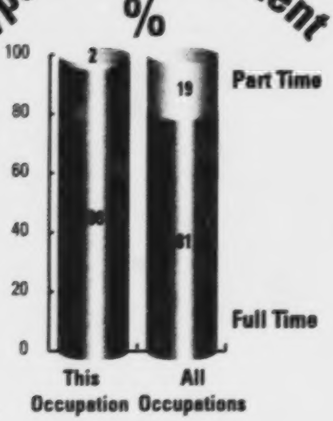
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Managers in Communication (Except Broadcasting)

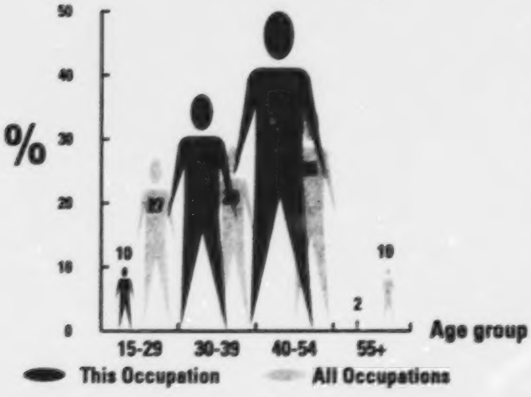
Where They Work



Type of Employment



Distribution by Age



At Work

People in this group work in telephone, telegraph, satellite and other telecommunication companies, and in Canada Post Corporation and courier companies.

- Telecommunication carrier managers plan and direct the operations of telecommunication organizations and facilities. They analyze and evaluate telecommunication installation, operation and maintenance services and recommend improvements.
- Postal and courier service managers plan and direct the activities and operations of postal facilities, courier service companies or Canada Post divisions. They review the effectiveness of their services and make required changes.

Education, Training & Experience

- These managers usually require a university degree or college diploma. Many recent entrants have an undergraduate university degree.
- Telecommunication carrier managers usually must have a university degree or college diploma in science, electrical or electronics engineering or a related field and several years' experience, including supervisory experience, in a related technical occupation.
- Postal and courier service managers usually need several years' supervisory or operational experience.

In These Occupations...

- 20,000 people were employed in 1998, an increase of 63.1% from 1988. After employment gains of 22.1% from 1988 to 1993, employment grew 33.5% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 79% are telecommunication carrier managers and 21% are postal and courier service managers.
- 2% work part-time, well below the average of 19% for all occupations.
- 5% are self-employed, well below the average of 17% for all occupations.
- 41% are women, compared to an average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.

Check out the 'big picture' in "World of Work: Overviews and Trends"

- the unemployment rate averaged 0.9% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for managerial occupations and occupations in the business, finance and administration sectors.
- the average earnings are comparable to those for other managerial occupations but are among the highest for occupations in the business, finance and administration sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities and earnings are both well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings for these managers is expected to be matched by the number of qualified job seekers.
- With rapidly changing telecommunications technology, individuals with both appropriate formal education and specific experience in information technology will be more successful in the job market.
- Most of the increase in employment requirements through 2004 in these occupations is expected to occur in the telecommunication carriers industry.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	41 700	53 100	58 800
Average	31 600	43 100	49 700
Lowest 20%	21 800	29 800	37 500

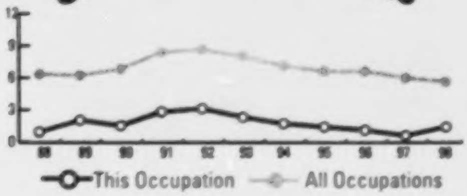
Overall Average for All Ages (15+)

This Occupation	All Occupations
45 600	37 400

Work Prospects

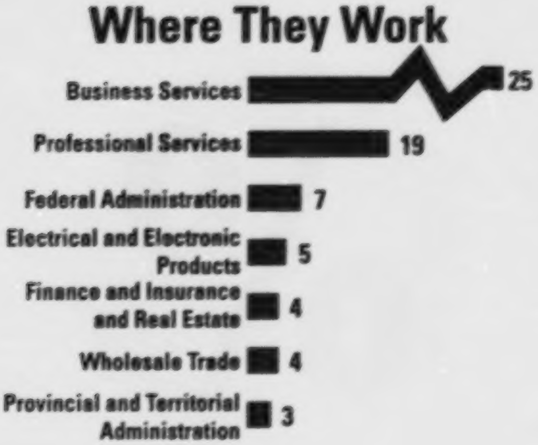
CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

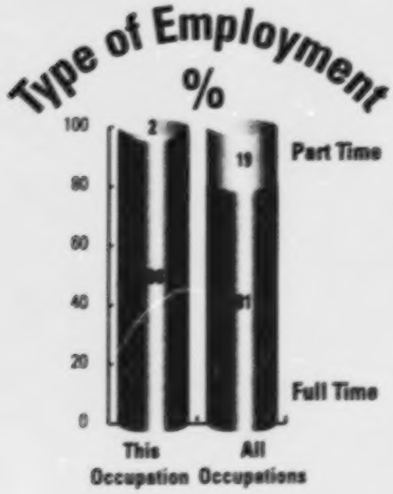
Unemployment Rate

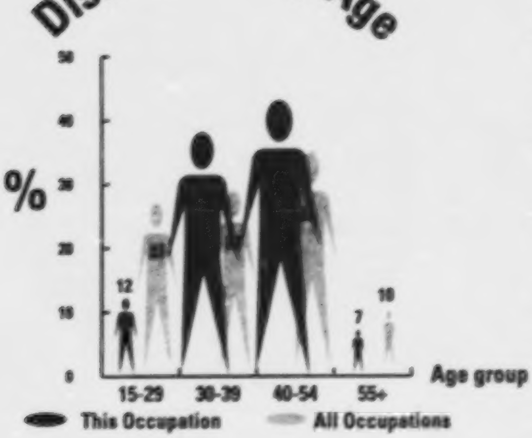


Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Managers in Engineering, Architecture, Science and Information Systems







At Work

These managers work in engineering consulting and scientific research companies, architectural firms, government and a wide range of private sector organizations.

- Engineering managers plan and direct the operations of engineering departments, services and firms engaged in consulting, research and other engineering activities.
- Architecture managers, including directors, vice-presidents, principals-in-charge and project architects, plan and direct the operations of organizations specializing in residential, commercial, industrial or institutional architecture or in all types.
- Landscape architecture managers plan and direct the operations of landscape architecture organizations.
- Science managers plan and direct the operations of research and development laboratories, quality control departments and other scientific organizations.
- Information systems and data processing managers plan and direct the operations of information systems and data processing organizations.

Education, Training & Experience

- In general, these managers require a university degree or a technical diploma in their occupational area and several years' experience, including supervisory experience. Most recent entrants have an undergraduate university degree or a community college diploma.
- Engineering managers need a bachelor's degree in engineering or a college diploma in engineering technology and must usually be registered as a Professional Engineer (P.Eng./ing.) or certified as a technologist (CET or AScT) by their provincial or territorial professional association.
- Architecture managers must be licensed as a professional in their field. Registration requires a minimum of three years of experience and a degree from an accredited university.
- Science managers need a master's or doctoral degree in a scientific discipline.
- Information systems and data processing managers usually have a bachelor's or master's degree in computer science, business administration, commerce or engineering or a technical diploma in a related area.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: U720, C720, M720, U316, U740, M120, U350, T720, M740 **NOC 021**

In These Occupations...

- 65,000 people were employed in 1998, an increase of 97.6% from 1988. After declining 0.4% over the 1988 to 1993 period, employment increased 98.3% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 51% are engineering, science and architecture managers and 49% are information systems and data processing managers.
- 3% work part-time, well below the average of 19% for all occupations.
- 11% are self-employed, compared to an average of 17% for all occupations.
- 24% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 1.9% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for managerial occupations and for occupations in the natural and applied sciences sectors.
- the average earnings are comparable to those for other managerial occupations and for other occupations in the natural and applied sciences sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities are well above average and earnings are above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings for these managers is expected to be matched by the number of qualified job seekers.
- Many managers in information systems and data processing will need skill upgrading (professional development) or a master's degree for promotion to more senior positions. Management of the design and implementation of computer networks is currently an area where demand is very strong.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the business services and professional services industries.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	40 700	54 500	63 900
Average	33 100	44 300	51 500
Lowest 20%	21 800	30 400	35 400

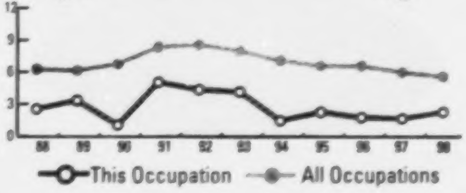
Overall Average for All Ages (15+)

This Occupation	All Occupations
47 000	37 400

Work Prospects

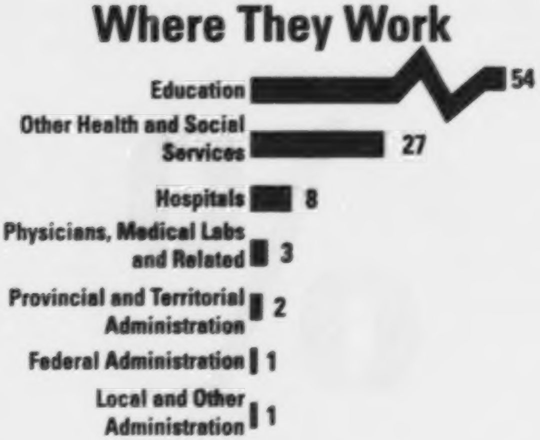
CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

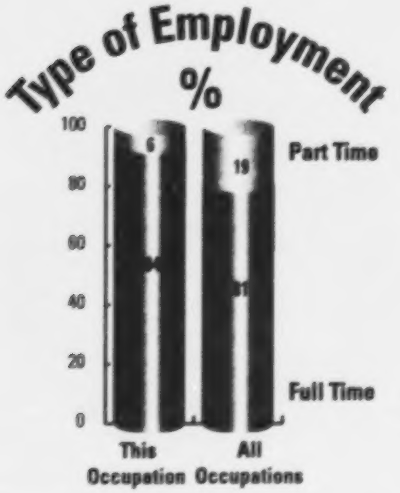
Unemployment Rate

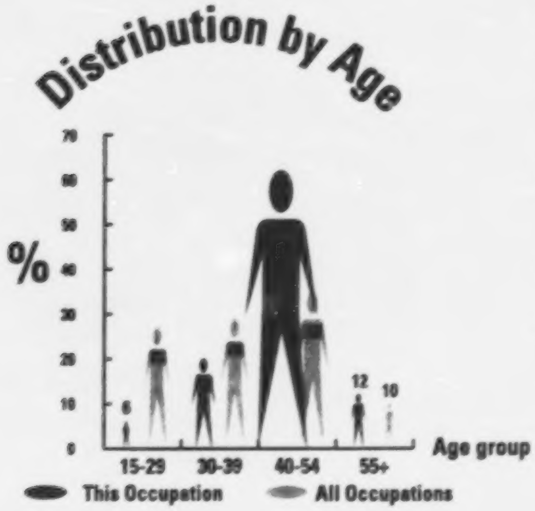


Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Managers in Health, Education, Social and Community Services







At Work

These managers work in hospitals and other health care institutions, educational institutions, social service and community agencies, correctional facilities, professional associations, political parties and other organizations.

- Managers in health care plan and direct the delivery of nursing, therapy, treatment and other services in hospitals and other health care organizations.
- Faculty administrators plan and direct academic and related activities of faculties. Registrars manage the registration activities and academic records at community colleges and universities.
- School principals plan and direct the activities of teachers and other staff in elementary and secondary schools.
- Vocational training school administrators plan and direct the activities of schools specializing in trades, business, technology and other vocational subjects.
- Administrators in elementary and secondary education plan and direct the academic affairs of a school district or system.
- Managers in social, community and correctional services plan and direct social and community service programs, labour and professional associations, non-governmental organizations promoting social issues, political party offices and the operations of correctional facilities.

Education, Training & Experience

- These managers usually require a bachelor's degree and, in some cases, a graduate degree in their field. Many recent entrants have an undergraduate university degree.
- They usually need several years' experience in a relevant profession, including supervisory experience.
- Health care managers and administrators usually have the same educational qualifications as the people they manage, such as physicians, dietitians and physiotherapists.
- Elementary and high school principals and administrators must have a teacher's certificate and several years' experience as senior teachers or department heads.

In These Occupations...

- 90,000 people were employed in 1998, an increase of 41.9% from 1988. After employment gains of 33.9% from 1988 to 1993, employment growth slowed to 6.0% from 1993 to

Check out the 'big picture' in "World of Work: Overviews and Trends"

1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.

- 40% are school principals and administrators of elementary and secondary education; 26% are managers in health care; and 21% are managers in social, community and correctional services.
- 6% work part-time, well below the average of 19% for all occupations.
- 3% are self-employed, well below the average of 17% for all occupations.
- 59% are women, well above the average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 1.9% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for managerial occupations.
- the average earnings are comparable to those for other managerial occupations.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities are above average and earnings are well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings for these managers is expected to increase more rapidly than the number of qualified, experienced job seekers.
- Fiscal decisions by governments and the restructuring of health and medical services may affect employment opportunities in these occupations. The best opportunities for health service managers may be in the private sector - for example, managing nursing homes. Social and community service managers may also have opportunities in the private sector.
- Administrators in all these areas will need good information systems skills, as they will need to work increasingly with computerized database and financial management systems.
- Most of the increase in employment requirements through 2004 in these occupations is expected to occur in the education and health and social services industries.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	39 700	53 800	62 100
Average	31 200	42 500	49 800
Lowest 20%	21 600	29 600	36 500

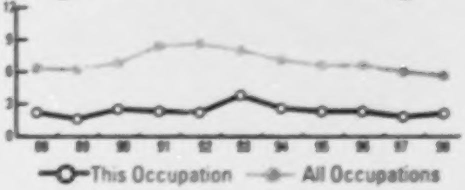
Overall Average for All Ages (15+)

This Occupation	All Occupations
46 100	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

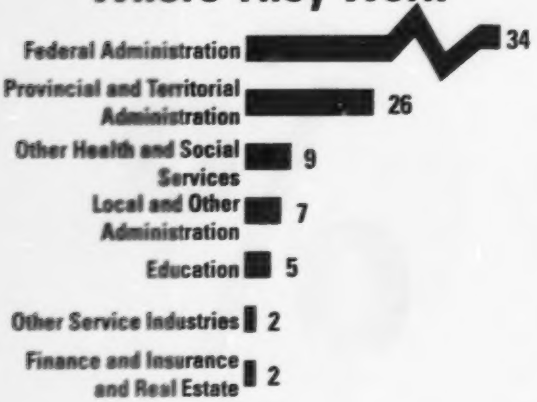
Unemployment Rate



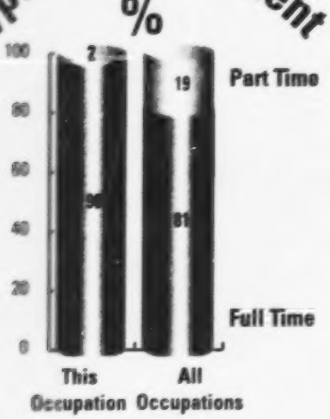
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Managers in Public Administration

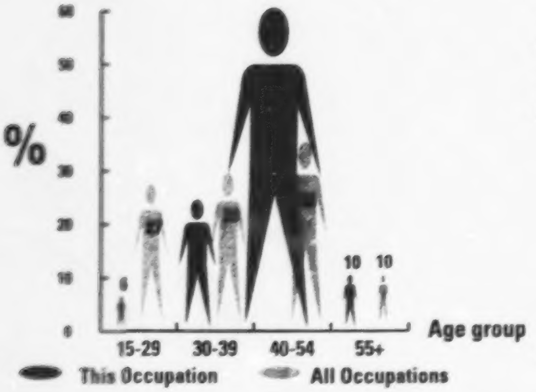
Where They Work



Type of Employment



Distribution by Age



At Work

These managers work in government departments, agencies and legislative bodies. They direct the development, implementation and evaluation of government policies, research and programs, and manage and control human and financial resources.

- Government managers in health and social fields are concerned with the protection and promotion of health and social welfare for individuals and communities.
- Government managers in the field of economics are involved in areas such as taxation, labour markets, transportation, international trade and business development.
- Government managers in educational fields deal with elementary, high school, community college and university education.
- Other government public administration managers direct the operations of legislatures and other activities such as intergovernmental affairs and elections.

Education, Training & Experience

- Most of these managers require a bachelor's degree related to their work and may also need a graduate degree. Many recent entrants have an undergraduate university degree.
- They usually require several years' experience in their profession or have government experience in specific areas of policy development, research or program administration.
- Some managers in health and social policy may need a college diploma, rather than a university degree, in their field of work.
- Some managers in health policy and program administration may require certification in a health profession. For example, city medical officers of health must be physicians.
- Managers in educational policy and program administration must have provincial teaching certificates.
- With experience, they may advance to senior management positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: M120, U120, M850, M130, M820

NOC 041

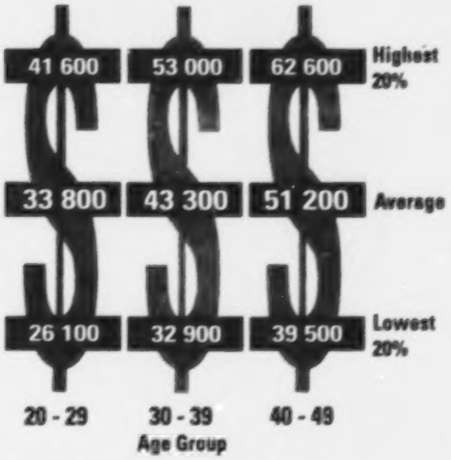
In These Occupations...

- 17,000 people were employed in 1998, an increase of 25.0% from 1988. However, after rising 26.1% over the 1988 to 1993 period, employment decreased 0.8% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 43% are government managers in economic analysis; 27% are government managers in health and social policy; and 11% are government managers in education policy development.
- 2% work part-time, well below the average of 19% for all occupations.
- 1% are self-employed, well below the average of 17% for all occupations.
- 39% are women, compared to an average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 1.9% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for managerial occupations.
- the average earnings are comparable to those for other managerial occupations.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities and earnings are both well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings for these managers is expected to be matched by the number of qualified job seekers.
- The best prospects for these managers may be in the area of information systems.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in various levels of public administration and in the health and social services industries.

Earnings



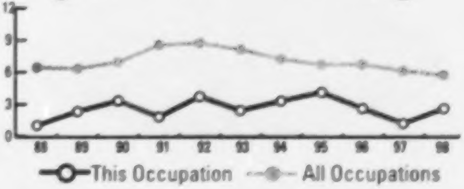
Overall Average for All Ages (15+)

47 200	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

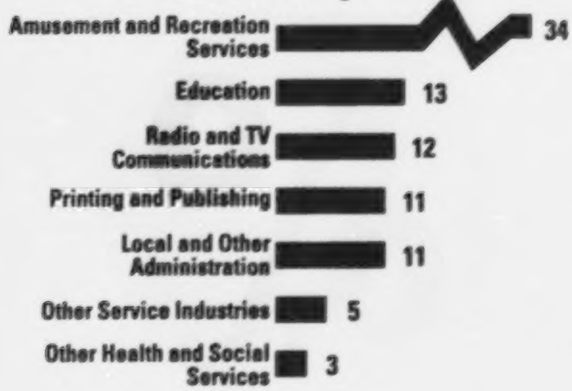
Unemployment Rate



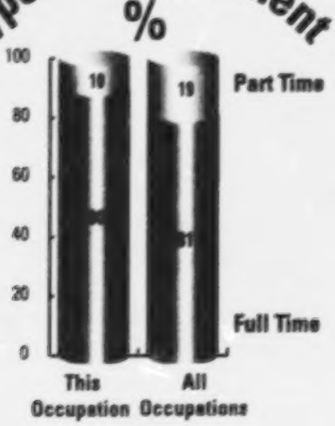
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Managers in Art, Culture, Recreation and Sport

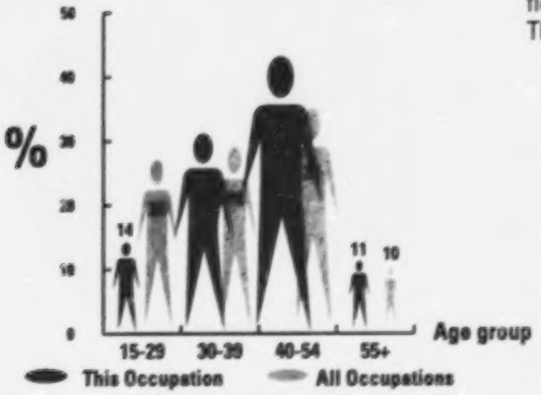
Where They Work



Type of Employment



Distribution by Age



At Work

These managers work in libraries, archives, museums and art galleries; for newspapers and book, magazine and other publishers; in motion picture, broadcasting and other performing arts institutions; in recreation and sports centres; and in government.

- Managers of libraries, archives, museums and art galleries plan and direct the activities of these organizations or technical departments within them.
- Managers in publishing, motion pictures, broadcasting and other performing arts plan and direct the operations of newspapers, publishing firms, radio and television stations, and film, theatre, record and video production companies.
- Managers in recreation and sport plan and direct the activities, projects and operations of recreational facilities and sports programs and services. They also manage professional athletic teams and national and provincial sports agencies.

Education, Training & Experience

- Most of these managers require advanced university degrees and several years' experience in their profession, field or industry. In some instances, appropriate work experience may serve as a substitute for educational qualifications. Some may need supervisory experience. Many recent entrants have an undergraduate university degree.
- Library managers must have a graduate degree in library and information science.
- Archive managers need a graduate degree in archival science or history.
- Museum and art gallery managers usually require a graduate degree related to arts administration.
- Managers in publishing, motion pictures and other performing arts have a university degree or college diploma in communications, journalism, broadcasting or another arts discipline.
- Recreation and sports managers need a university degree in recreology, physical education, sports administration or a related field, or a college diploma in recreation or sports administration. They may require certification in an area such as coaching.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: U240, M430, U410, U010, C050, C893, M240

NOC 051

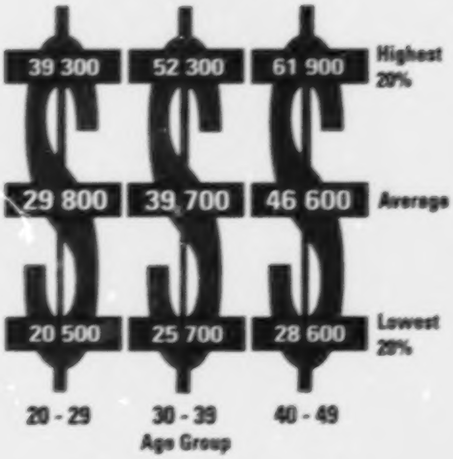
In These Occupations...

- 20,000 people were employed in 1998, an increase of 62.0% from 1988. After employment gains of 49.6% from 1988 to 1993, employment growth slowed to 8.3% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 42% are managers in publishing, motion pictures, broadcasting and performing arts; 41% are recreation and sport program and service directors; and 17% are library, archive, museum and art gallery managers.
- 11% work part-time, compared to an average of 19% for all occupations.
- 19% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 52% are women, compared to the average of 45% for all occupations.
- the unemployment rate averaged 4.2% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for managerial occupations.
- the average earnings are comparable to those for other managerial occupations but among the highest for occupations in the art, culture, recreation and sport sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities are above average and earnings are well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings for these managers is expected to be matched by the number of qualified job seekers.
- There may be shortages of administrators with fund-raising and market-development skills. Technological change will affect many of these occupations, as their function moves increasingly toward conceiving and managing information systems.
- Competition is expected to be keen for managerial positions in libraries and galleries as government spending restrictions limit the availability of positions. Library and archive managers may find opportunities in the private sector managing corporate memory systems.
- All of Canada's producers of cultural material are looking increasingly to export markets. Consequently, they need managers with specialized export marketing and promotion skills.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the amusement and recreation services and printing and publishing industries.

Earnings



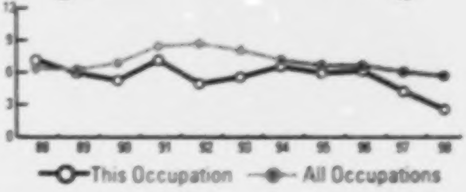
Overall Average for All Ages (15+)

43 000	37 400
This Occupation	All Occupations

Work Prospects

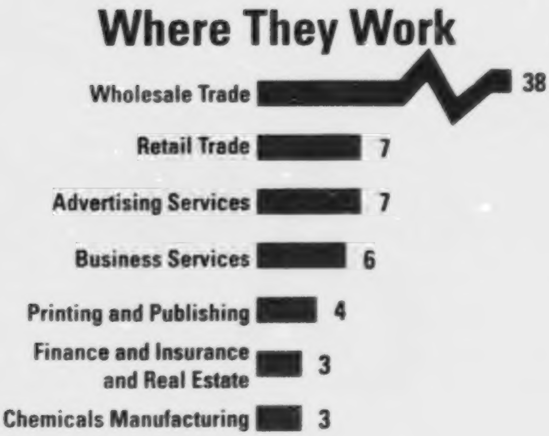
CURRENT	2004
GOOD	GOOD
FAIR	FAIR
LIMITED	LIMITED

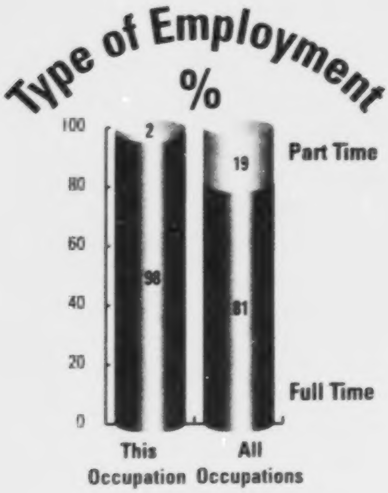
Unemployment Rate

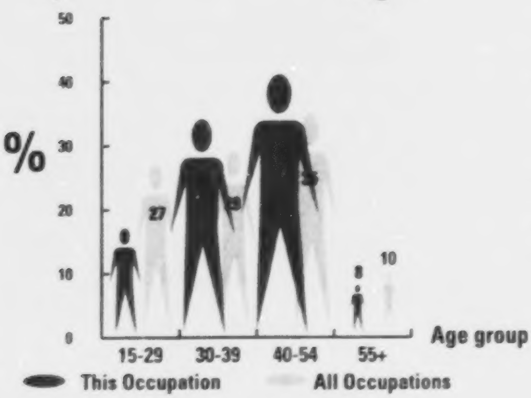


Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Sales, Marketing and Advertising Managers







At Work

People in this occupational group work in commercial, industrial and wholesale organizations; marketing and public relations consulting companies; and government departments.

- Sales managers plan and direct the activities of sales departments of commercial, industrial, wholesale and other non-retail organizations.
- Marketing managers plan and direct the activities of organizations that develop marketing strategies to promote the sale of products and services. They also establish distribution networks for these products and services.
- Advertising managers plan and direct the activities of organizations that develop and carry out advertising campaigns to promote the sale of products and services.
- Public relations managers plan and direct the activities of organizations that develop and implement communications strategies and information programs, publicize activities and events, and maintain media relations on behalf of clients.

This occupational group also includes communications directors, fund-raising campaign managers, and media relations, promotions and sales and marketing managers.

Education, Training & Experience

- These managers require a college diploma or university degree. In some cases, appropriate work experience may serve as a substitute for these educational qualifications. Many recent entrants have an undergraduate university degree.
- Sales and marketing managers need a college diploma or university degree in business administration or a related field with a sales or marketing specialization and several years' experience as sales and marketing representatives. According to the Canadian Professional Sales Association, managers may need a certified sales professional designation.
- Advertising and public relations managers must have a college diploma or university degree in public relations, communications, marketing, journalism or a related field, and several years' experience as advertising, public relations and communications officers.
- With experience, they may move to senior management positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

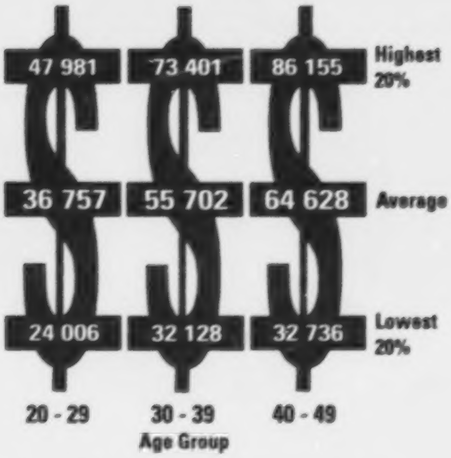
In These Occupations...

- 123,000 people were employed in 1998, an increase of 21.6% from 1988. After employment gains of 8.9% from 1988 to 1993, employment grew 11.7% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 3% work part-time, well below the average of 19% for all occupations.
- 15% are self-employed, compared to an average of 17% for all occupations.
- 31% are women, well below the average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 2.4% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations in the sales and service sectors.
- the average earnings are comparable to those for other managerial occupations but are among the highest for occupations in the sales and service sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities and earnings are both well above average.
- Over the next five years, this outlook is not expected to change. The Canadian Sales Management Association predicts that over this period growth in sales management opportunities will outpace growth in the supply of qualified candidates.
- Development of electronic methods of sales and marketing, in particular through the Internet, means that these managers will need to develop expertise in this area. Familiarity with desktop publishing and with external database technologies may also be important for these managers.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the wholesale trade, business services and advertising industries.

Earnings



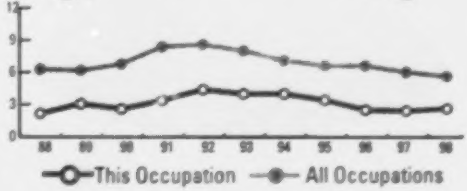
Overall Average for All Ages (15+)

This Occupation	All Occupations
58 418	37 400

Work Prospects

CURRENT	2004
GOOD	**GOOD**
FAIR	FAIR
LIMITED	LIMITED

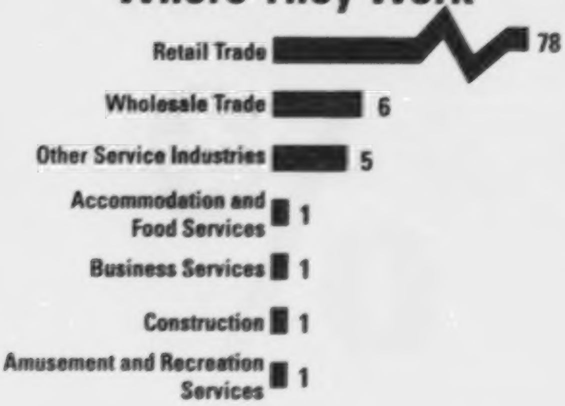
Unemployment Rate

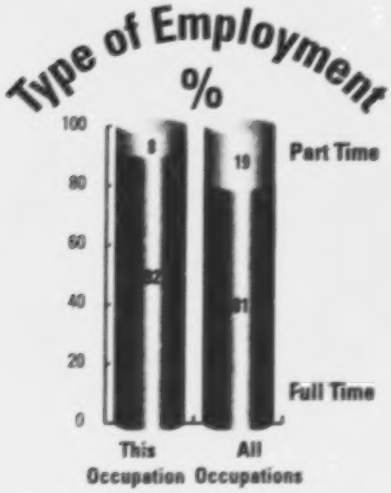


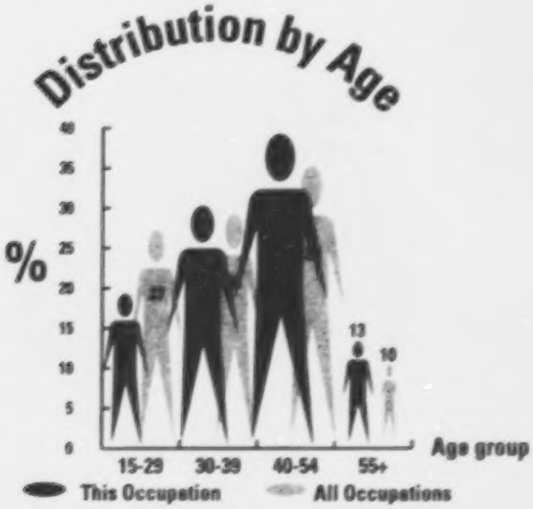
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Managers in Retail Trade

Where They Work







At Work

People in this occupational group work in department and chain stores, travel agencies, supermarkets, car dealerships and other retail organizations. They may own and operate their own retail business or operate a retail business for its owner. Their duties may require them to:

- plan and direct the operations of organizations engaged in retail sales;
- manage staff and assign duties;
- study market research and trends to determine consumer demand, potential sales volumes and the effect of competitors' operations;
- determine, locate and select merchandise and services to be sold;
- implement price and credit policies;
- develop and implement marketing strategies;
- plan budgets and authorize expenditures;
- carry out the organization's banking; and
- determine staffing requirements and hire, or oversee hiring of, staff.

This occupational group also includes antique dealers, boat dealers, and managers of bookstores, car dealerships, clothing stores, department stores, service stations, sporting goods stores, supermarkets, travel agencies and variety stores.

Education, Training & Experience

- Retail trade managers must usually have a high school diploma.
- They may require a college diploma or university degree in business administration or in a field related to the product or service sold at their place of work.
- They usually require several years' retail sales experience, including some supervisory experience.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: U120, C121, C140, C141

NOC 062

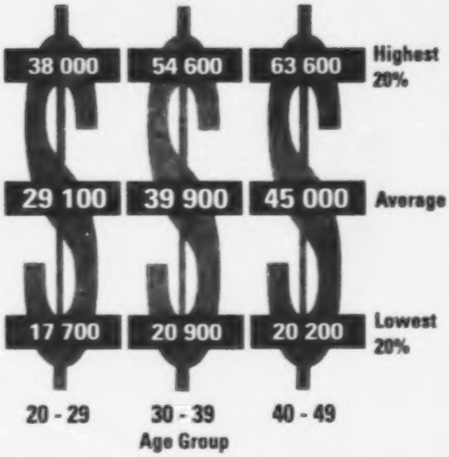
In These Occupations...

- 393,000 people were employed in 1998, an increase of 15.7% from 1988. After employment gains of 10.7% from 1988 to 1993, employment growth slowed to 4.5% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 8% work part-time, well below the average of 19% for all occupations.
- 46% are self-employed, well above the average of 17% for all occupations.
- 40% are women, compared to an average of 45% for all occupations.
- the unemployment rate averaged 3.2% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations in the sales and service sectors.
- the average earnings are comparable to those for other managerial occupations but are among the highest for occupations in the sales and service sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities and earnings are above the average level for comparable occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings for these managers is expected to be matched by the number of qualified job seekers.
- Retailing firms will continue to improve their operations using point-of-sale data entry, computerized inventory control, computerized order entry, electronic scanning and telecommunications technologies. Managers will need to be familiar with these systems.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the retail trade industry.

Earnings



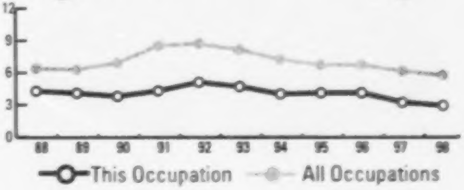
Overall Average for All Ages (15+)

This Occupation	All Occupations
41 500	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

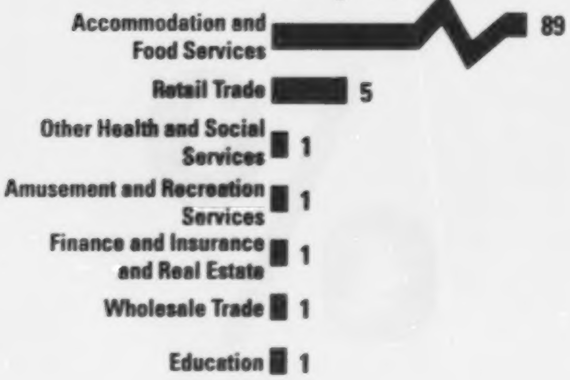
Unemployment Rate



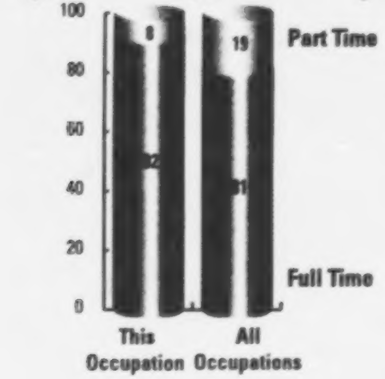
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Managers in Food Service and Accommodation

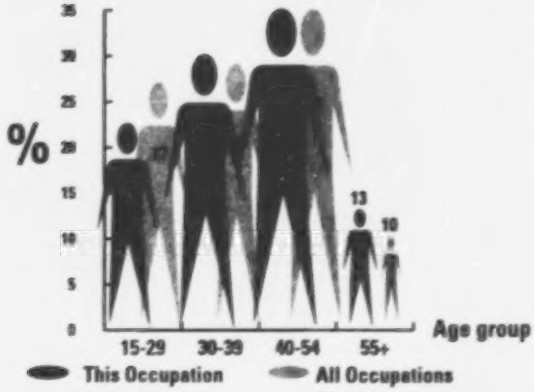
Where They Work



Type of Employment



Distribution by Age



At Work

These managers work in restaurants, hotels, motels, student residences, resorts, private clubs, bars and other food service and accommodation facilities.

- Restaurant and food service managers plan and direct the operations of restaurants, bars, cafeterias and formal dining rooms. They determine the type of service to be offered, prepare staff schedules, monitor staff performance and control the costs and inventories of food and beverages. They must be aware of the laws and regulations regarding the sale of alcohol and must ensure that health and safety regulations are followed.
- Accommodation service managers plan and direct the operations of hotels, motels, resorts, student residences and similar organizations or departments within these facilities. They prepare budgets, monitor expenses and schedule and supervise staff.

This occupational group also includes banquet, bar, cafeteria and catering service managers; hotel directors and managers; guest house, tourist home and bed and breakfast operators; and reservations managers.

Education, Training & Experience

- These managers must have a high school diploma.
- Restaurant and food service managers usually require a college or other diploma in food and beverage management, hospitality or a related field. They must have several years' experience, including supervisory experience.
- Accommodation service managers usually require a college diploma or university degree in hotel management or a related discipline if they are employed by hotel chains or other large organizations. They usually need several years' experience, and this experience may replace formal education.

Check out the 'big picture' in
"World of Work: Overviews and Trends"

In These Occupations...

- 159,000 people were employed in 1998, an increase of 31.8% from 1988. After employment gains of 17.4% from 1988 to 1993, employment growth slowed to 12.3% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 81% are restaurant and food service managers; and 19% are accommodation service managers.
- 8% work part-time, well below the average of 19% for all occupations.
- 54% are self-employed, well above the average of 17% for all occupations.
- 44% are women, compared to an average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 4.4% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for managerial occupations.
- the average earnings are among the lowest for managerial occupations but among the highest for occupations in the sales and service sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings for these managers is expected to be matched by the number of qualified job seekers.
- Use of computerized ordering systems, reservation systems, inventory control, in-room management systems and property management systems will continue to increase in this sector. Managers will need to be familiar with these systems.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the accommodation and food services industry.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	36 400	50 700	58 900
Average	27 400	36 800	42 200
Lowest 20%	17 400	18 600	17 800

Age Group

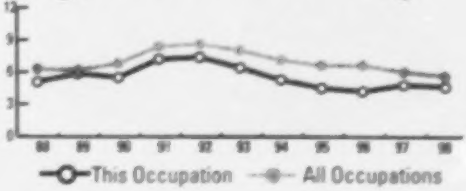
Overall Average for All Ages (15+)

This Occupation	All Occupations
39 000	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

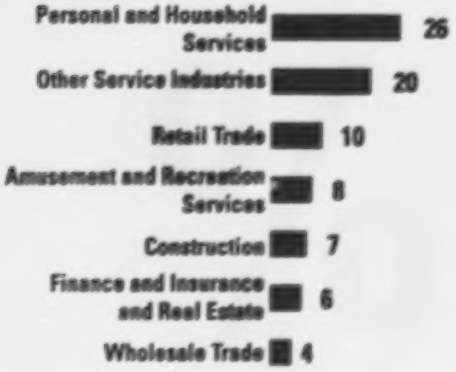
Unemployment Rate

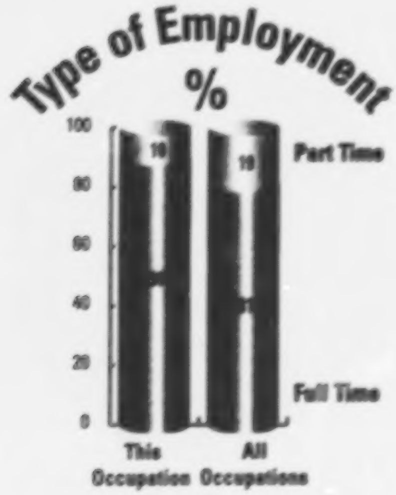


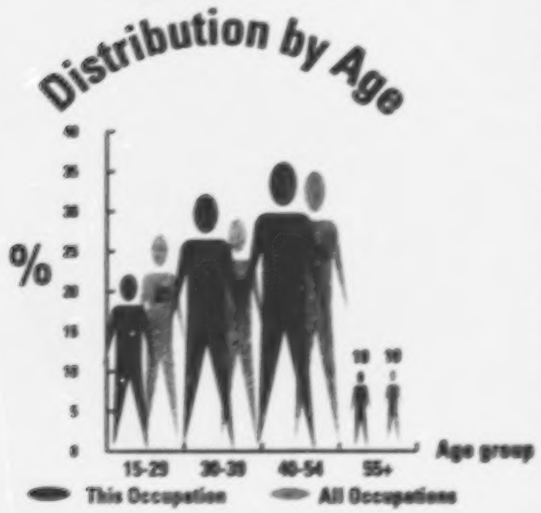
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Managers in Other Services

Where They Work







At Work

These service managers work for organizations that provide services such as dry cleaning, hairdressing, and commercial, industrial and residential cleaning, and schools that provide instruction in activities such as driving, language, music, cooking and dance. Their duties may require them to:

- plan and direct the operations at their places of business;
- establish or implement policies and procedures for staff;
- plan and control budgets and inventories;
- respond to questions and complaints and resolve problems;
- manage contracts for advertising and marketing strategies; and
- hire, train and supervise staff.

Education, Training & Experience

- These managers usually require a high school diploma.
- They may need a college diploma or, if they are managing a school, a vocational certificate in their course of instruction.
- Most recent entrants have a high school or community college diploma.
- They usually need one to three years' experience.

In These Occupations...

- 17,000 people were employed in 1998, an increase of 47.8% from 1988. This reflects an increase of 20.4% from 1988 to 1993 and 22.8% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 10% work part-time, compared to an average of 19% for all occupations.
- 29% are self-employed, well above the average of 17% for all occupations.
- 49% are women, compared to an average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 2.4% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations in the sales and service sectors.

Check out the 'big picture' in "World of Work: Overviews and Trends"

- the average earnings are among the lowest for managerial occupations but are comparable to those for other occupations in the sales and service sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities are above average, but earnings are below the average level for comparable occupations.
- Over the next five year, this outlook is not expected the change, as the number of job openings for these managers is expected to be matched by the number of qualified job seekers.
- Computerization and new telecommunications technologies will increasingly affect jobs in this sector. Managers will need to be familiar with these technologies.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the personal and household services industry.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	34 900	49 500	58 300
Average	26 600	34 500	39 200
Lowest 20%	15 300	18 200	16 400

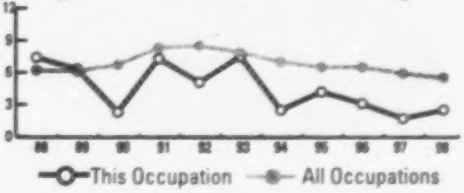
Overall Average for All Ages (15+)

This Occupation	All Occupations
36 100	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

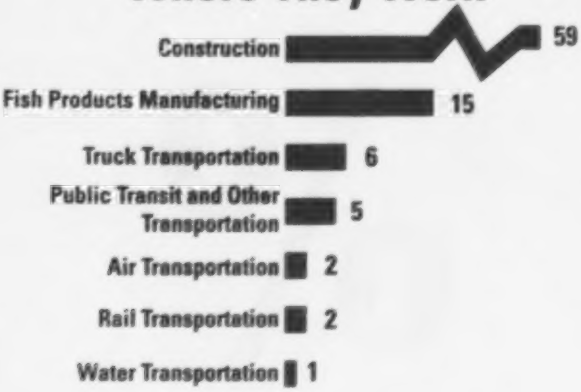
Unemployment Rate



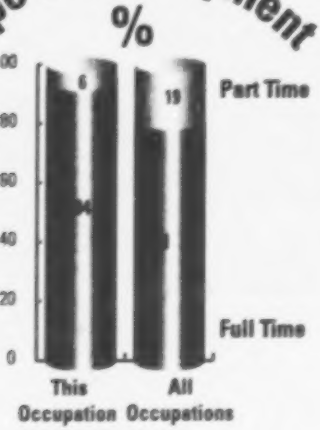
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Managers in Construction and Transportation

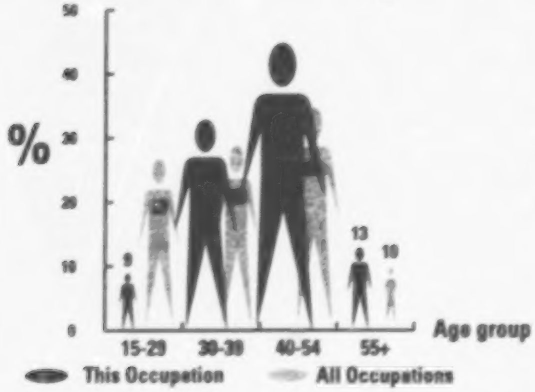
Where They Work



Type of Employment



Distribution by Age



At Work

These managers work in construction, transportation, freight forwarding and shipping companies, and in the transportation departments of companies in retail and manufacturing sectors and utilities.

- Construction managers plan and direct the operations of organizations engaged in residential, commercial, institutional and industrial construction.
- Residential home builders and renovators plan and direct the activities of their own companies. They prepare bids for projects; consult with customers, architects and engineers; employ subcontractors; prepare work schedules; and oversee work.
- Transportation managers of operations plan and direct the operations of companies such as airlines, railways and municipal transit systems. They set policies and standards, including safety procedures for handling dangerous goods, and oversee the dispatch of vehicles, vessels and aircraft.
- Transportation managers of freight traffic plan and direct companies responsible for coordinating, arranging and monitoring the transportation and movement of goods.

Education, Training & Experience

- These managers have different requirements depending on the area of work. Many recent entrants have a post-secondary diploma or degree.
- Construction managers usually require a college diploma in construction technology or a university degree in civil engineering and several years' experience.
- Residential home builders and renovators usually need extensive experience in residential construction.
- Transportation managers of operations usually have a bachelor's degree in business administration or engineering; several years' experience, including supervisory experience; and certification as commercial pilots, vessel masters or other transportation operators. Extensive experience as a supervisor and operator in a particular mode of transportation may replace formal education.
- Transportation managers of freight traffic must complete high school and may require a college diploma or university degree in business or transportation administration. They require several years' experience related to freight traffic.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 0711
Part 2 Field of Study Cross-index: U370, T332, U350, C350, U330, C331, C334

NOC 071

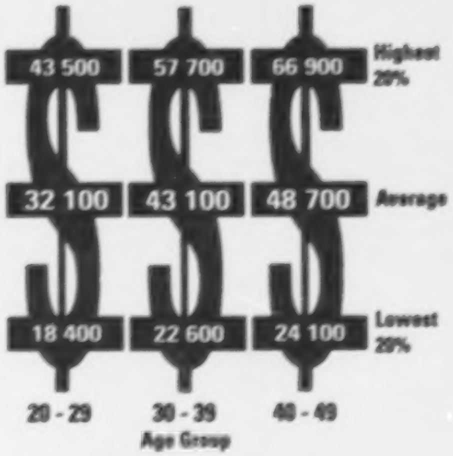
In These Occupations...

- 97,000 people were employed in 1998, an increase of 17.8% from 1988. After employment gains of 16.0% from 1988 to 1993, employment growth slowed to 1.5% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 50% are construction managers; 30% are residential home builders and renovators; and 19% are transportation managers.
- 7% work part-time, well below the average of 19% for all occupations.
- 61% are self-employed, well above the average of 17% for all occupations.
- 8% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 3.3% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations in the trades, transport and equipment operation sectors.
- the average earnings are comparable to those for other managerial occupations but are among the highest for occupations in the trades, transport and equipment operation sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, the outlook is expected to improve to "Good". The number of job openings is expected to increase more rapidly than the available number of qualified job seekers, due to strong employment growth in the construction sector and a high retirement rate in these occupations.
- Advances in building materials, the development of smart buildings and the proliferation of new building standards will make the work of construction managers more complex.
- Increasing use of computerized technologies in the transportation industry, such as electronic inventory control and tracking systems, will mean that transportation managers need to develop skills in information systems.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the construction industry.

Earnings



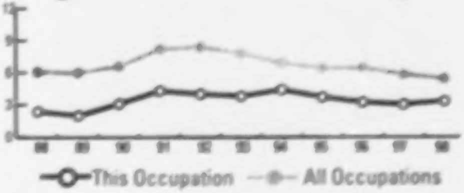
Overall Average for All Ages (15+)

41 400	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	[✓ GOOD]
[✓ FAIR]	FAIR
LIMITED	LIMITED

Unemployment Rate



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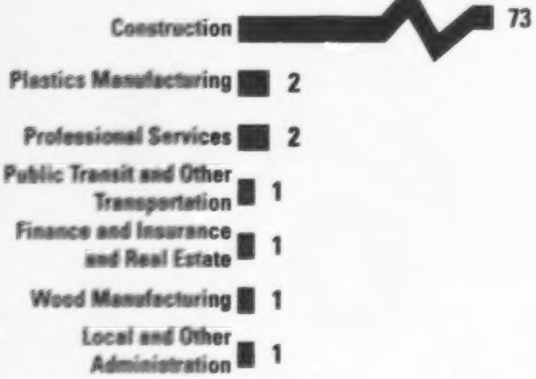
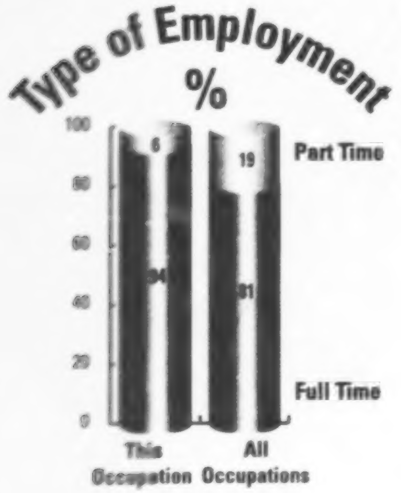
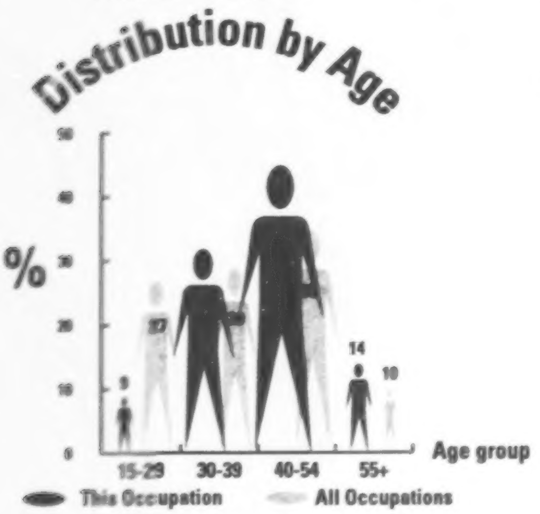
Construction Managers

Where They Work







At Work

Construction managers work in residential, commercial and industrial construction companies and in construction departments of companies outside the construction industry. Their duties may require them to:

- manage construction projects from start to finish according to schedules, specifications and budgets;
- prepare and submit construction project budget estimates;
- prepare schedules and milestones for projects, monitor progress and issue progress reports to clients;
- prepare contracts and negotiate changes with architects, consultants, clients, suppliers and subcontractors;
- develop and implement quality control programs;
- represent their companies in matters such as business services and union contract negotiations;
- direct the purchase of building materials and land acquisitions; and
- hire and supervise the activities of subcontractors and staff.

Education, Training & Experience

- Construction managers must usually have a university degree in civil engineering or a college diploma in construction technology as well as several years' experience in construction, including time spent as construction supervisors or field superintendents.
- If they have extensive experience in the construction industry, they may not need a college or university education.
- Some employers may require construction managers to have professional engineering status or construction trade certification.
- With experience, they may progress to senior management positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 071
Part 2 Field of Study Cross-index: U350, T332, C350, C331, U120

NOC 0711

In These Occupations...

- 49,000 people were employed in 1998, an increase of 0.7% from 1988. However, after rising 5.4% over the 1988 to 1993 period, employment decreased 4.4% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 6% work part-time, well below the average of 19% for all occupations.
- 47% are self-employed, well above the average of 17% for all occupations.
- 7% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 4.8% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for managerial occupations but among the lowest for occupations in the trades, transport and equipment operation sectors.
- the average earnings are comparable to those for other managerial occupations but are among the highest for occupations in the trades, transport and equipment operation sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities are average, although earnings are above average.
- Over the next five year, this outlook is expected to improve to "Good", as the number of job openings for experienced construction managers is expected to increase more rapidly than the number of qualified, experienced job seekers.
- Advances in building materials, the development of smart buildings and the proliferation of new building standards will make the work of construction managers more complex.
- Continuing economic growth will mean that more large building projects will be undertaken, which will increase the number of job opportunities for qualified construction managers,
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the construction industry.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	46 700	62 700	68 400
Average	35 400	47 100	50 400
Lowest 20%	22 300	26 700	24 400

Age Group

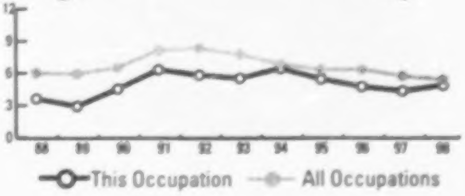
Overall Average for All Ages (15+)

This Occupation	All Occupations
43 500	37 400

Work Prospects

CURRENT	2004
GOOD	[✓ GOOD]
[✓ FAIR]	FAIR
LIMITED	LIMITED

Unemployment Rate



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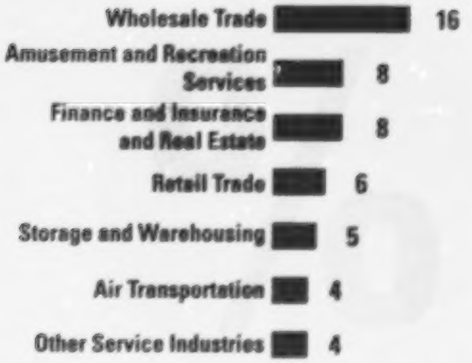
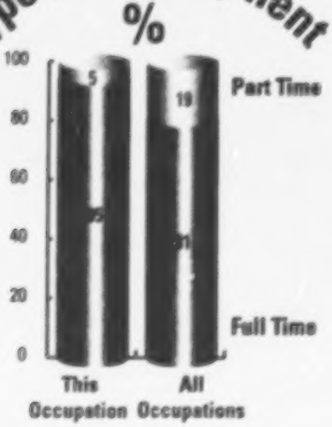
Facility Operation and Maintenance Managers

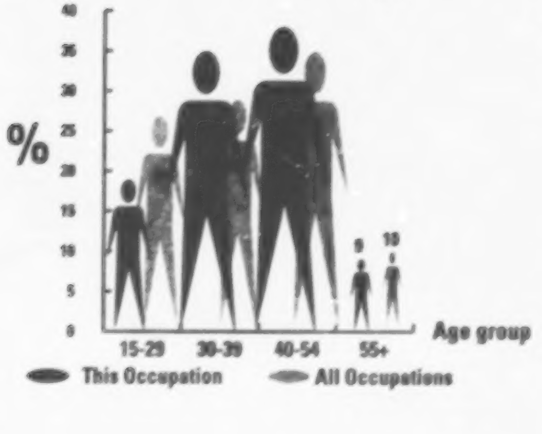
Where They Work



Type of Employment



Distribution by Age



At Work

These managers work in a wide variety of locations, including airports, harbours, canals, shopping and convention centres, warehouses, office buildings, grain terminals, sports facilities, schools and universities.

- Facility operation managers plan and direct the operations of commercial, transportation and recreational facilities. They oversee the leasing of facility space, manage the facility operational budget and arrange for maintenance, parking and other facility services.
- Maintenance managers plan and direct the operations of maintenance departments within commercial, industrial, institutional, recreational and other facilities. They direct the maintenance and repair of machinery, equipment, electrical and mechanical systems, and develop safety inspection schedules.

This occupation also includes facility operation managers such as arena and marina managers, and maintenance managers such as facilities maintenance heads and mechanical, plant maintenance and maintenance and service superintendents.

Education, Training & Experience

- These managers require post-secondary education or a combination of technical training and experience.
- Facility operation managers must complete a college or university program in business administration or in a discipline related to facility operation and maintenance, or have a combination of technical training and experience in administration or maintenance. They usually require five to ten years' experience in facility operation.
- Maintenance managers must complete a college or university program in electrical or mechanical engineering or in a discipline related to building maintenance, or have a combination of technical training and building maintenance experience. They usually require several years' supervisory experience.

Check out the 'big picture' in "World of Work: Overviews and Trends"

NOC 072

In These Occupations...

- 22,000 people were employed in 1998, an increase of 25.8% from 1988. This reflects an increase of 13.6% from 1988 to 1993 and 10.8% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 5% work part-time, well below the average of 19% for all occupations.
- 8% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in these occupations has decreased significantly over the last ten years.
- 25% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 3.8% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations in the trades, transport and equipment operation sectors.
- the average earnings are comparable to those for other managerial occupations but are among the highest for occupations in the trades, transport and equipment operation sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities and earnings are both above the average levels for comparable occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings for these managers is expected to be matched by the number of qualified job seekers.
- Consolidation of facilities in the health care and educational sectors has a negative impact on the employment of these managers. Opportunities may increase in the private sector, as the construction of new commercial buildings picks up with economic recovery.
- Much of the increase in employment requirements through 2004 for these occupations is expected to occur in the wholesale trade, amusement and recreation services and finance, insurance and real estate industries.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	39 500	52 500	60 300
Average	30 300	40 700	46 600
Lowest 20%	20 100	26 000	30 100
		Age Group	

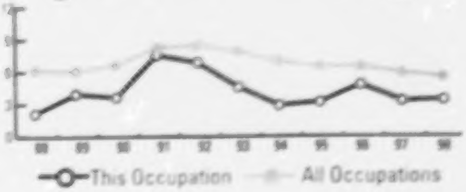
Overall Average for All Ages (15+)

This Occupation	All Occupations
42 800	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

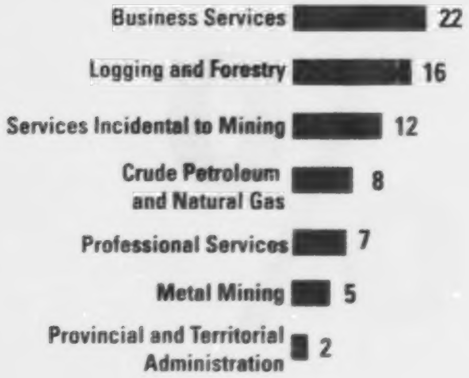
Unemployment Rate



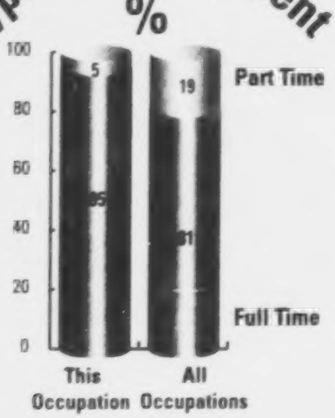
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Managers in Primary Production (Except Agriculture)

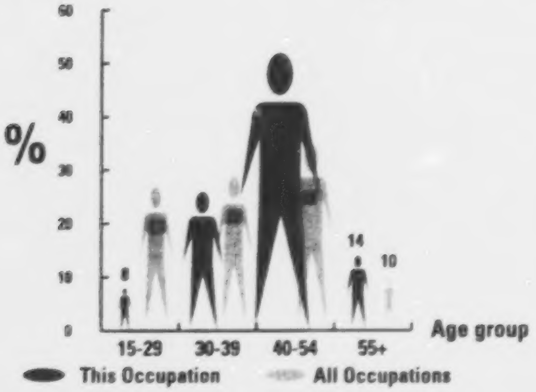
Where They Work



Type of Employment



Distribution by Age



At Work

These managers work in forestry and logging, mining and quarrying, oil and gas and commercial fishing companies, and organizations that provide services to these industries. Their duties may require them to:

- oversee and analyze operations in their companies by setting production quotas, planning extraction sites and developing policies for the removal of raw materials;
- recommend changes to senior management to make sure that their company meets production quotas and procedures;
- evaluate production sites to determine personnel, equipment and other requirements;
- prepare production reports;
- make sure that safety rules are followed;
- hire personnel and oversee staff training; and
- direct activities such as construction of access roads and temporary living quarters.

Education, Training & Experience

- These managers usually require a bachelor's degree related to their area of work.
- They usually also need several years' supervisory experience, which could replace formal education requirements.
- Forestry managers usually need a degree in forestry science or forest engineering.
- Mining and quarrying managers usually need a degree in mining engineering or earth sciences.
- Managers in oil and gas drilling, oil production and related services usually need a degree in geology, earth sciences or petroleum engineering.
- With experience, they may progress to senior management positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: U120, U641, M120, C641, C640

NOC 081

In These Occupations...

- 8,000 people were employed in 1998, an increase of 28.6% from 1988. After declining 12.5% over the 1988 to 1993 period, employment increased 47.0% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 5% work part-time, well below the average of 19% for all occupations.
- 21% are self-employed, compared to an average of 17% for all occupations.
- 10% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 2.1% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations in the primary industry sector.
- the average earnings are comparable to those for other managerial occupations but are among the highest for occupations in the primary industry sector.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities are above average and earnings are well above average.
- Over the next five years, the outlook is expected to weaken to "Fair", as the number of qualified, experienced managers seeking work in these occupations is expected to exceed the number of available job openings.
- Competition for these managerial positions is expected to be keen, with a large number of experienced and qualified workers competing for promotion.
- Employment requirements for these occupations are expected to increase across a broad range of industries through 2004.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	43 900	55 700	56 700
Average	31 900	41 300	47 500
Lowest 20%	19 600	24 500	25 400

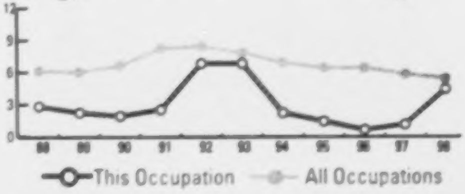
Overall Average for All Ages (15+)

This Occupation	All Occupations
46 000	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	GOOD
FAIR	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate



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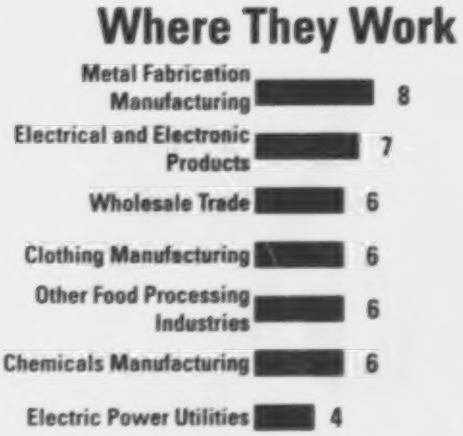
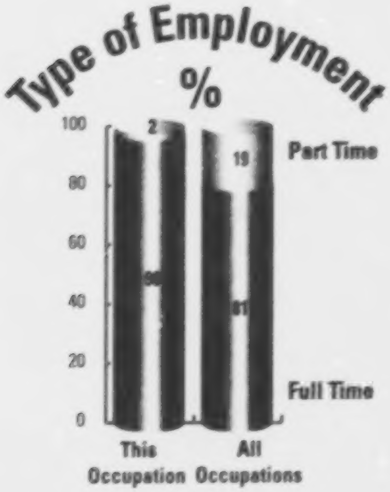
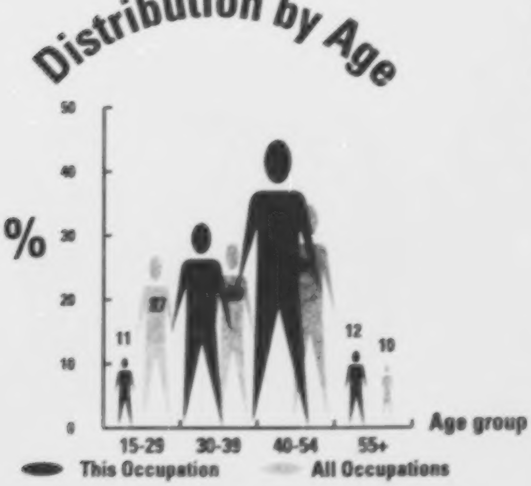
Managers in Manufacturing and Utilities







At Work

These managers work in manufacturing companies, public and private utilities and heating oil distribution companies.

- Manufacturing managers plan and direct the operations of manufacturing companies or production departments within organizations, usually under the direction of a general manager or other senior manager. They develop production schedules and implement changes to production equipment and systems.
- Utilities managers plan and direct the operations of utility companies or organizations providing services such as waste disposal and recycling and the distribution of water, electricity, natural gas and heating oil to residential, commercial and industrial consumers.

Education, Training & Experience

- These managers usually require a college or university degree in their area of work. In some instances, appropriate work experience may substitute for educational qualifications. Most recent entrants have an undergraduate university degree or a community college diploma.
- Manufacturing managers usually require a college diploma or university degree in engineering or business administration. They must also have five to ten years' supervisory experience in manufacturing.
- Utilities managers usually must have a college diploma or university degree in an appropriate discipline. For example, managers of transmission lines need a college or university electrical engineering program, and water supply managers require a college or university program in water resource technology.
- Utilities managers also need several years' supervisory experience in a related utilities operations department.
- Utilities managers involved in the transmission and distribution of electrical power, natural gas and heating oil usually require certification as a professional engineer (P.Eng./ing.).

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: U120, C121, U370, M120, U316, C315, U380

NOC 091

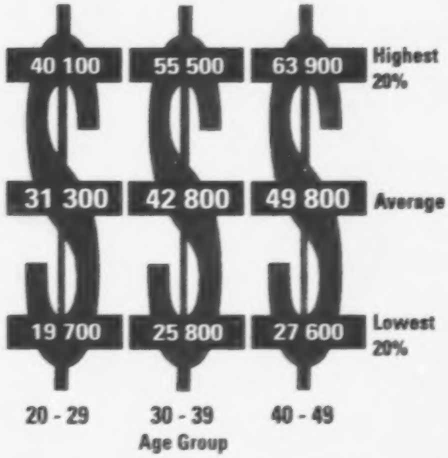
In These Occupations...

- 79,000 people were employed in 1998, an increase of 19.5% from 1988. After declining 1.3% over the 1988 to 1993 period, employment increased 21.0% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 88% work as managers in manufacturing and 12% work as managers in utilities.
- 2% work part-time, well below the average of 19% for all occupations.
- 16% are self-employed, compared to an average of 17% for all occupations.
- 17% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 2.6% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations in the processing, manufacturing and utilities sectors.
- the average earnings are comparable to those for other managerial occupations but are among the highest for occupations in the processing, manufacturing and utilities sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities and earnings are both well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings for these managers is expected to be matched by the number of qualified job seekers.
- Competition to move up into these occupations is expected to be keen among a large number of highly qualified personnel at the supervisory level.
- Employment requirements in these occupations are expected to increase through 2004 across a broad range of manufacturing industries and utilities. The largest increases in employment requirements are expected to occur in the electrical and electronics products and non-electrical machinery industries.

Earnings



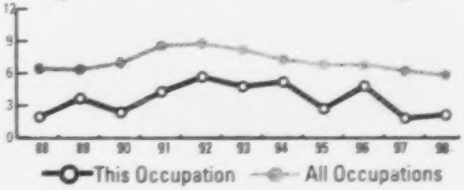
Overall Average for All Ages (15+)

This Occupation	All Occupations
45 700	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

Unemployment Rate



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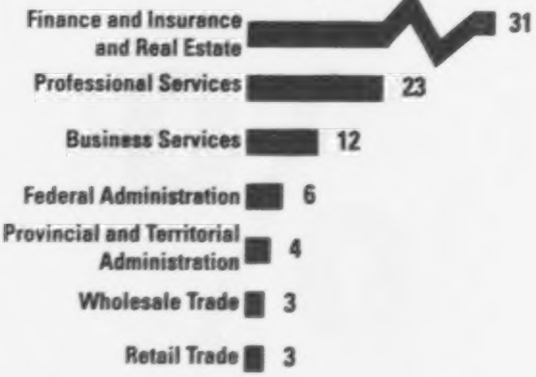
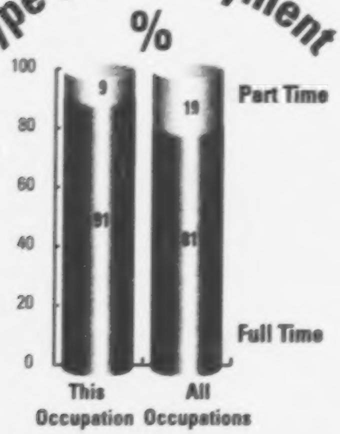
Auditors, Accountants and Investment Professionals

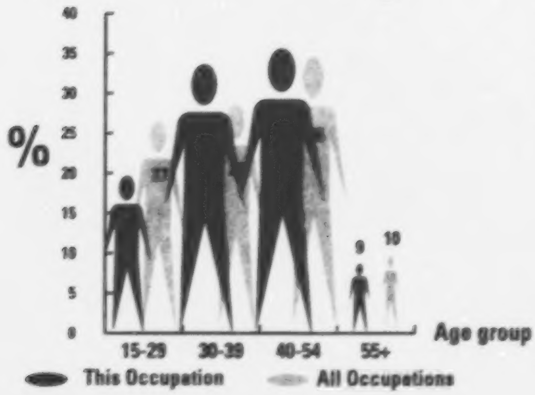
Where They Work



Type of Employment



Distribution by Age



At Work

People in this group work in auditing and accounting firms, government, banks, trust companies, investment and underwriting firms, stock and mortgage brokerages, commodity exchanges and other companies and non-profit organizations. They may also be self-employed.

- Accountants examine and analyze accounting and financial records and plan, set up and administer accounting systems.
- Auditors audit financial records and provide opinions on the fairness of these records.
- Financial and investment analysts collect and analyze financial data to provide advice for their clients.
- Financial planners develop financial plans for clients.
- Securities agents and investment dealers and advisors buy and sell stocks, bonds and other securities for clients.
- Traders buy and sell stocks, commodity futures and other securities at stock exchanges on behalf of investment dealers.
- Financial examiners and forensic investigators examine financial records to ensure compliance with legislation and regulations.
- Financial investigators investigate trading activities.
- Investment underwriters underwrite new issues of stocks/bonds.
- Trust officers administer estate and other trusts.
- Mortgage brokers apply for loans on behalf of clients.

Education, Training & Experience

- People in this group usually require a community college diploma or a bachelor's degree in economics, commerce, business administration or a related field. Most recent entrants have an undergraduate university degree.
- They usually also need industry courses and several years' on-the-job training.
- Most require provincial licences and certification by their professional associations.
- With experience, they may progress to senior management positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 1111
Part 2 Field of Study Cross-index: U120, M120, C110, C121, M820, U740, C111, T121, U130

NOC 111

In These Occupations...

- 292,000 people were employed in 1998, an increase of 36.8% from 1988. Most of the growth occurred from 1993 to 1998 when employment increased 22.7%. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 62% are financial auditors and accountants.
- 9% work part-time, compared to an average of 19% for all occupations.
- 22% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 49% are women, compared to an average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 2.7% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations in the business, finance and administration sectors.
- the average earnings are among the lowest for professional occupations but are among the highest for occupations in the business, finance and administration sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities are well above average, although earnings are at the average level.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Most industries use computerized financial systems to monitor business finances. Other related applications that are being used are electronic funds transfer, automatic teller machines and electronic data interchange. These applications will lead to new skill requirements.
- Financial institutions increasingly seek professional client service managers with a broad range of financial sector skills.
- Most of the increase in employment requirements through 2004 in these occupations is expected to occur in the professional services, financial, insurance, real estate and business services industries.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	37 600	47 300	52 400
Average	30 900	40 300	44 200
Lowest 20%	21 600	23 200	22 500

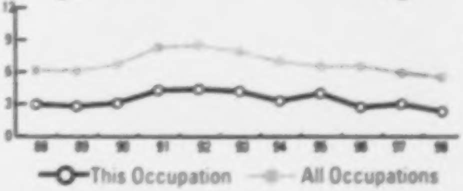
Overall Average for All Ages (15+)

This Occupation	All Occupations
41 000	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

Unemployment Rate



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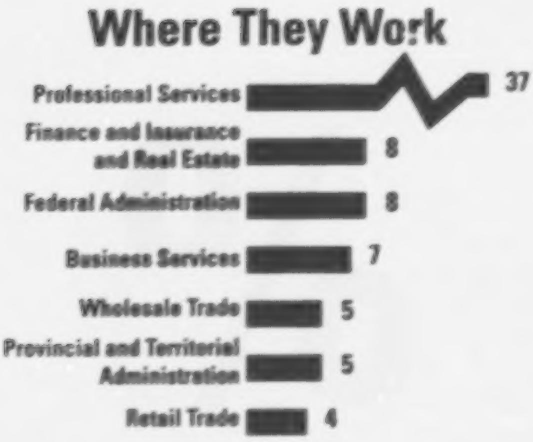
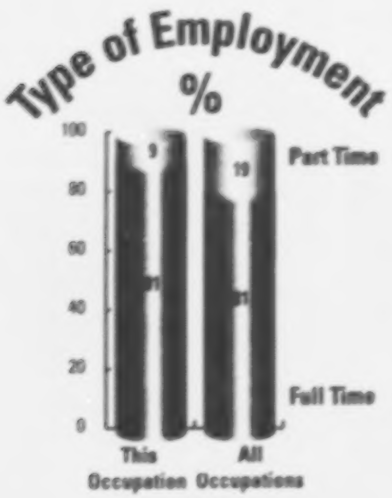
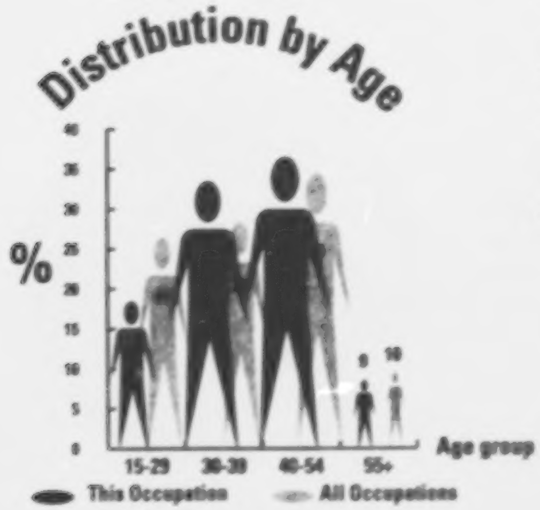
Financial Auditors and Accountants







At Work

People in this occupation work in government and in auditing and accounting firms throughout the private sector. They may also be self-employed.

- Financial auditors examine the accounting and financial records of individuals and establishments. They analyze records such as bank statements, tax returns and ledger entries for accuracy and attest that the records comply with proper accounting procedures.
- Accountants plan, organize and administer accounting systems and prepare financial information for individuals, companies and other organizations.

Education, Training & Experience

- People in this occupation must generally have some college or university education related to accounting, complete an accredited professional accounting program and have several years' on-the-job training. Most recent entrants have an undergraduate university degree. As well, they must be accredited by their professional associations and usually require a provincial or territorial licence to practise public accounting.
- Financial auditors must complete the requirements to be an accountant plus have some experience as an accountant.
- Chartered accountants must have a university degree and be accredited by the Institute of Chartered Accountants. In Quebec, they must be members of the Ordre des comptables agréés du Québec.
- Certified general accountants must be accredited by the Certified General Accountants Association. In Quebec, they must be members of the Ordre des comptables généraux licenciés du Québec.
- Certified management accountants must have a university degree and be accredited by the Society of Management Accountants. In Quebec, they must be members of the Ordre professionnel des comptables en management accrédités du Québec.
- With experience, people in this occupation can progress to management positions in auditing and accounting.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 111
Part 2 Field of Study Cross-index: U120, C121, C110, C111, M120

NOC 1111

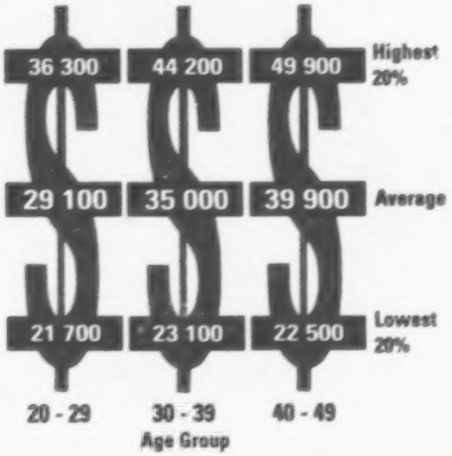
In These Occupations...

- 181,000 people were employed in 1998, an increase of 28.6% from 1988. This reflects an increase of 14.8% from 1988 to 1993 and 12.0% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 9% work part-time, compared to an average of 19% for all occupations.
- 25% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in this occupation has increased significantly over the last ten years.
- 53% are women, compared to an average of 45% for all occupations. The proportion of women in this occupation has increased significantly over the last ten years.
- the unemployment rate averaged 3.3% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the lowest for professional occupations but are comparable to those for other occupations in the business, finance and administration sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Most industries use computerized financial systems to monitor business finances. Other applications that are being used are electronic funds transfer, automatic teller machines and electronic data interchange. These will all lead to new skill requirements for these professionals.
- Concern about corporate fraud may create opportunities in forensic accounting. Payroll experts are also likely to be in high demand.
- Most of the increase in employment requirements through 2004 in this occupation is expected to occur in the professional services and business services industries.

Earnings



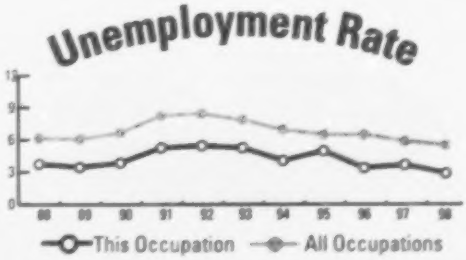
Overall Average for All Ages (15+)

37 100	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate



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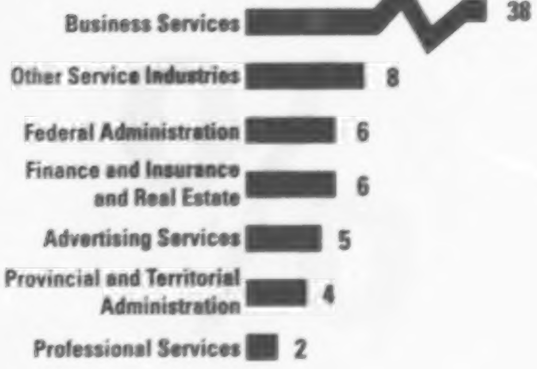
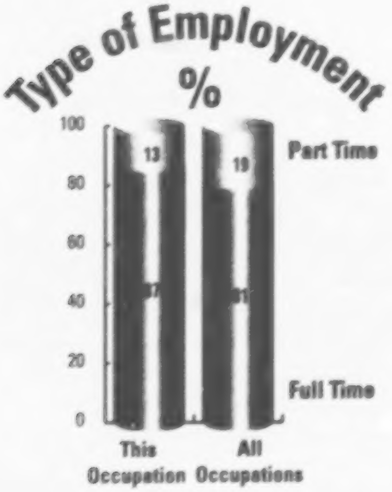
Human Resources and Business Service Professionals

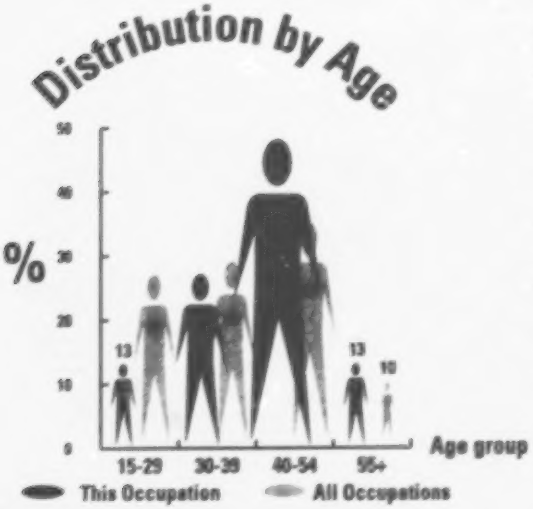
Where They Work



Type of Employment



Distribution by Age



At Work

People in this group work in government and in organizations throughout the private sector, including management consulting firms and advertising agencies. They may also be self-employed.

- Human resources specialists develop, carry out and evaluate human resources and labour relations policies, programs and procedures, and advise on personnel matters.
- Management consultants research, analyze and provide advice on managerial methods and organization and propose improvements in areas such as operations, human resources and communications.
- Advertising and marketing consultants analyze and provide advice on advertising and marketing strategies. They may also plan, develop and implement advertising campaigns for print or electronic media.

This occupational group also includes human resources specialists such as job and wage analysts, classification and equity officers, labour relations officers and union representatives, and business service professionals such as advertising account executives, business methods analysts, organization analysts, promotion specialists and organization and methods researchers.

Education, Training & Experience

- People in this group usually require a college diploma or university degree in their specialty and some may require graduate degrees. Most recent entrants have an undergraduate university degree.
- With experience, they may progress to management positions.

In These Occupations...

- 91,000 people were employed in 1998, an increase of 104.6% from 1988. This reflects an increase of 21.4% from 1988 to 1993 and 68.5% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 57% are professionals in business services to management and the remainder are human resource specialists.
- 13% work part-time, compared to an average of 19% for all occupations. The proportion of part-time workers in these occupations has increased significantly over the last ten years.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 1121, 1122
Part 2 Field of Study Cross-index: U120, M120, C121, U880

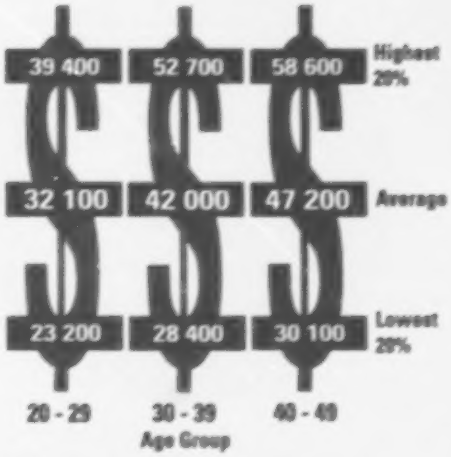
NOC 112

- 41% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 44% are women, compared to an average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 2.8% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are comparable to those for other professional occupations but are among the highest for occupations in the business, finance and administration sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities are average and earnings are well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Computerized human resource systems and management systems will increase the information technology skill requirements of these professionals.
- Most of the increase in employment requirements through 2004 in these occupations is expected to occur in the business services industry.

Earnings



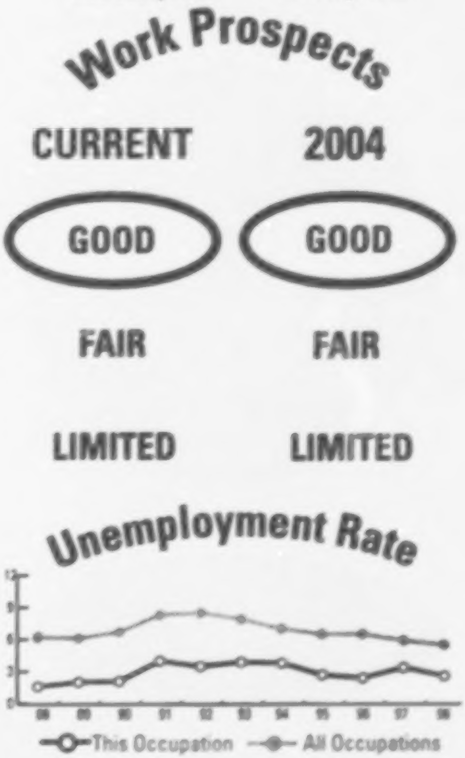
Overall Average for All Ages (15+)

This Occupation	All Occupations
43 500	37 400

Work Prospects

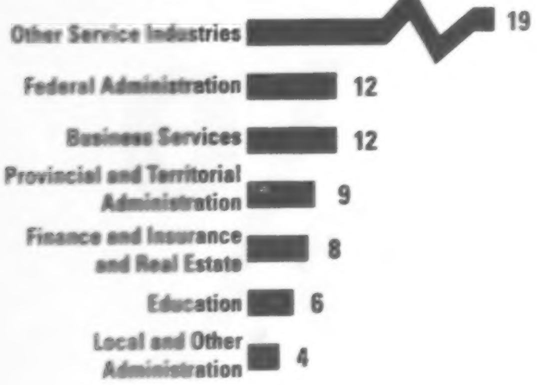
CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

Unemployment Rate

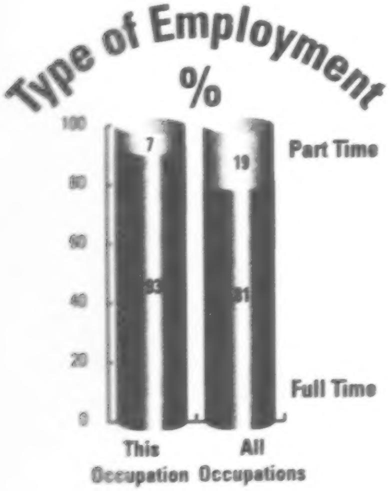


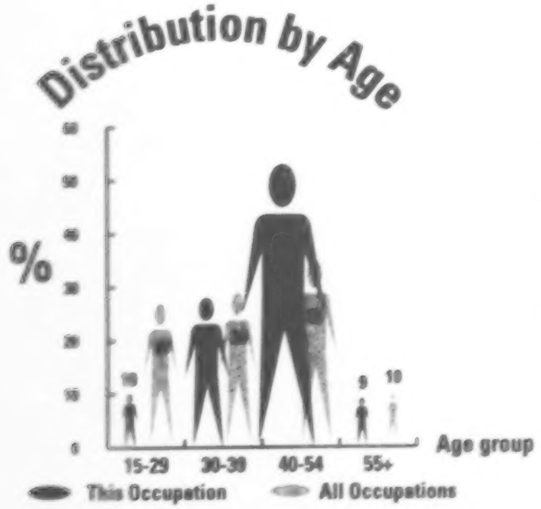
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Specialists in Human Resources



Where They Work





At Work

Specialists in human resources work throughout the private sector and in government. Their duties may require them to:

- develop, implement and evaluate personnel and labour relations policies, programs and procedures;
- administer benefit, employment equity and affirmative action programs;
- negotiate collective agreements and mediate labour disputes and grievances;
- prepare occupational classifications, job descriptions and salary scales;
- advise managers and employees on personnel policies, benefit programs and collective agreements; and
- coordinate employee performance appraisal programs.

Education, Training & Experience

- Specialists in human resources must complete either a university degree or college diploma in a field related to personnel management, such as business administration, industrial relations, commerce or psychology, or a professional development program in personnel administration. Most recent entrants have an undergraduate university degree.
- They may be required to gain some experience in a clerical or administrative position related to personnel administration.
- With experience, they may progress to management positions.

In These Occupations...

- 39,000 people were employed in 1998, an increase of 40.5% from 1988. This reflects an increase of 19.4% from 1988 to 1993 and 17.7% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 7% work part-time, well below the average of 19% for all occupations.
- 10% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in this occupation has increased significantly over the last ten years.
- 54% are women, compared to an average of 45% for all occupations. The proportion of women in this occupation has increased significantly over the last ten years.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 112
Part 2 Field of Study Cross-index: U120, M120, U880, U870, U240

NOC 1121

- the unemployment rate averaged 3% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are comparable to those for other professional occupations but are among the highest for occupations in the business, finance and administration sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Computerized human resource systems to maintain employee information will increase the skill requirements of these professionals.
- Employment requirements are expected to increase in this occupation through 2004 across a broad range of industries, with much of the increase in the business services industry.

Earnings

20 - 29	30 - 39	40 - 49	
37 900	48 500	55 700	**Highest 20%**
31 100	39 600	45 300	**Average**
24 700	29 100	32 300	**Lowest 20%**

Age Group

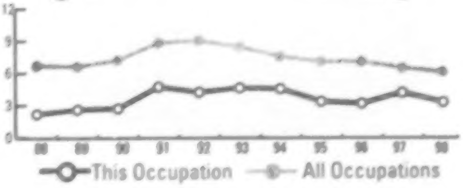
Overall Average for All Ages (15+)

42 300	37 400
This Occupation	**All Occupations**

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

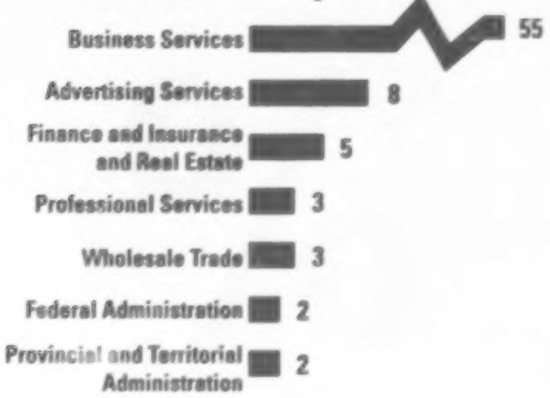
Unemployment Rate

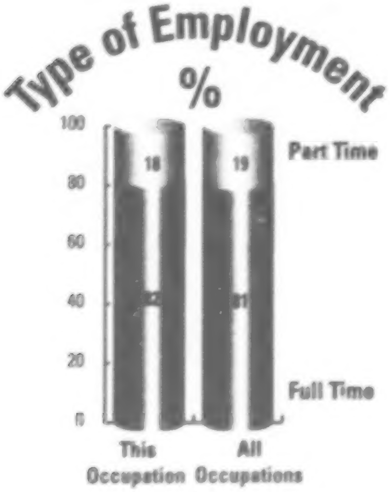


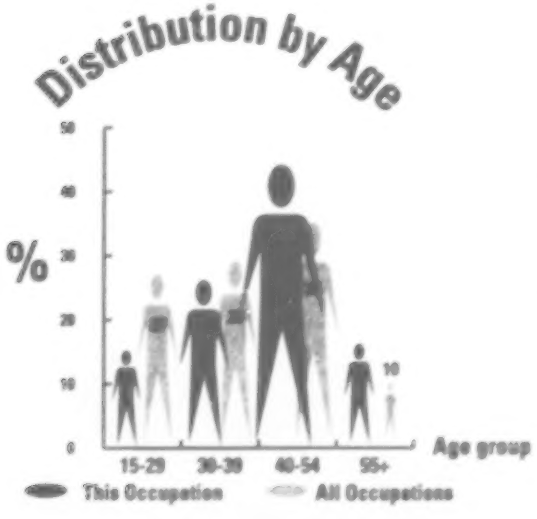
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Professional Business Services to Management

Where They Work







At Work

People in these occupations work in management consulting firms, advertising agencies and throughout the private sector and government. They may also be self-employed.

- Management consultants analyze the effectiveness of the managerial methods and organization of public and private sector organizations. They propose improvements to methods, systems and procedures in areas such as operations, human resources and communications. They may also plan the reorganization of the operation of an organization.
- Advertising and marketing consultants analyze the advertising needs and current marketing strategies of public and private sector establishments. They advise, develop and implement advertising campaigns for print and electronic media.

Education, Training & Experience

- People in these occupations usually require a bachelor's degree or college diploma in business administration or commerce. Many recent entrants have an undergraduate university degree.
- They may need a graduate degree in business administration.
- Management consultants may require certification by a provincial management consulting association.
- With experience, they may progress to senior and managerial positions.

In These Occupations…

- 52,000 people were employed in 1998, an increase of 161.5% from 1988. Most of the growth occurred from 1993 to 1998 when employment increased 112.2%. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 18% work part-time, compared to an average of 19% for all occupations. The proportion of part-time workers in this occupation has increased significantly over the last ten years.
- 65% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed workers in this occupation has increased significantly over the last ten years.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 112
Part 2 Field of Study Cross-index: U120, M120, U880, C121, U860

NOC 1122

- 36% are women, compared to an average of 45% for all occupations. The proportion of women in this occupation has increased significantly over the last ten years.
- the unemployment rate averaged 2.7% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are comparable to those for other professional occupations but are among the highest for occupations in the business, finance and administration sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", as employment opportunities are above average and earnings are well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Computerized management systems and the increasing reliance of business on innovative technology will increase the skill requirements for these management professionals.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the business services industry.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	39 900	56 900	63 000
Average	32 600	44 100	49 500
Lowest 20%	22 300	27 200	25 200

Age Group

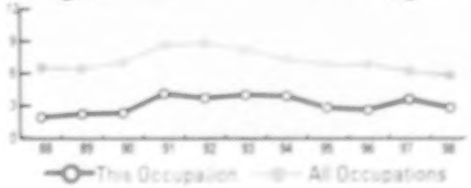
Overall Average for All Ages (15+)

This Occupation	All Occupations
44 500	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

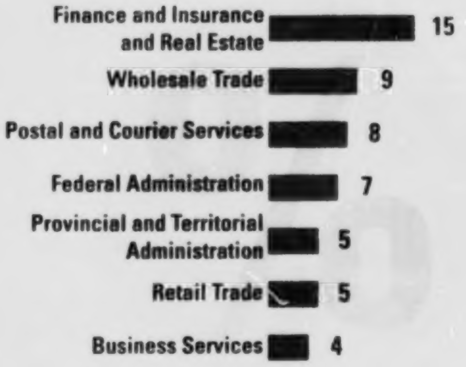
Unemployment Rate

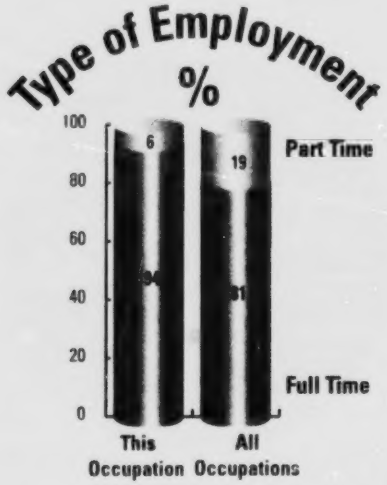


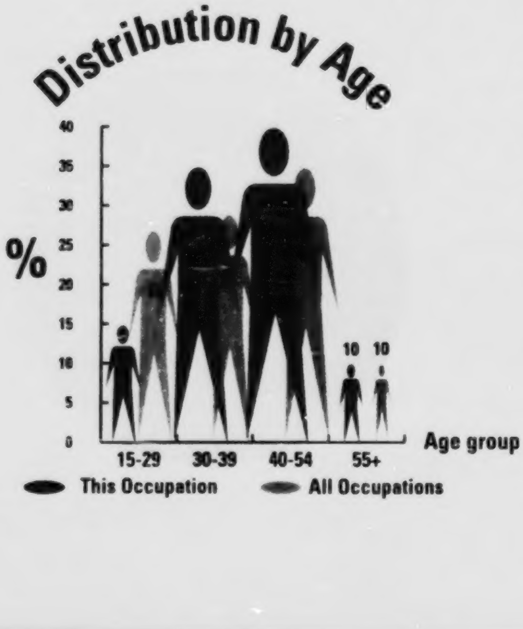
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Clerical Supervisors

Where They Work







At Work

People in this occupational group work in government and in the private sector. They supervise general office and administrative support clerks; finance and insurance clerks; library, correspondence and other information clerks; clerks who work in shipping, receiving and dispatching; and mail and postal clerks, letter carriers, couriers and messengers. Their duties may require them to:

- co-ordinate, assign and review work done;
- establish work schedules and procedures;
- co-ordinate activities with other work units or departments;
- resolve work-related problems;
- prepare and submit progress and other reports;
- train workers in job duties, safety procedures and company policies;
- requisition supplies and materials; and
- ensure smooth operation of computer systems, equipment and machinery.

This occupational group also includes registry supervisors; chief telephone operators; credit, payroll and savings supervisors; billing unit heads; claims adjustor supervisors; customer service supervisors; postal station supervisors; postmasters; head dispatchers and shippers; and traffic control supervisors.

Education, Training & Experience

- These supervisors must have a high school diploma. Many recent entrants have a community college diploma or undergraduate university degree.
- They usually require experience in the occupations they are supervising.
- They may also need completion of a college program or courses related to the occupations they are supervising.

In These Occupations...

- 77,000 persons were employed in 1998, a decrease of 5.1% from 1988. After rising 10.1% over the 1988 to 1993 period, employment decreased 13.8% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 30% supervise general office and administrative support clerks; 29% supervise finance and insurance clerks; and

Check out the 'big picture' in "World of Work: Overviews and Trends"

26% supervise recording, distributing and scheduling occupations.

- 6% work part-time, well below the average of 19% for all occupations.
- 7% are self-employed, well below the average of 17% for all occupations.
- 55% are women, compared to an average of 45% for all occupations.
- the unemployment rate averaged 3.6% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for technical, paraprofessional and skilled occupations.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations and for other occupations in the business, finance and administration sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited" as a result of long-term employment losses.
- Over the next five years, the outlook is expected to improve to "Fair". The number of job openings for clerical supervisors is expected to increase more rapidly than the number of qualified job seekers, mostly due to a high retirement rate in these occupations.
- Technological change may have a negative effect on this occupational group as office equipment technologies such as personal computers, electronic mail, facsimile machines and related software lead to a decrease in the number of clerical employees. However, these changes will increase the skill levels required for clerical supervisors.
- The small increase in employment requirements through 2004 in these occupations is expected to occur in the finance, insurance and real estate, business services and wholesale trade industries.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	35 500	44 000	48 900
Average	28 500	35 300	39 200
Lowest 20%	21 200	25 900	27 800

Age Group

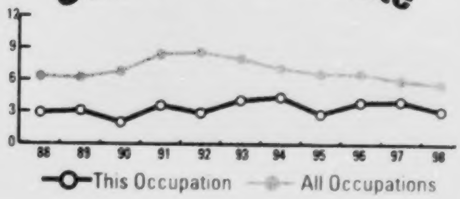
Overall Average for All Ages (15+)

This Occupation	All Occupations
35 900	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	[✓ FAIR]
[✓ LIMITED]	LIMITED

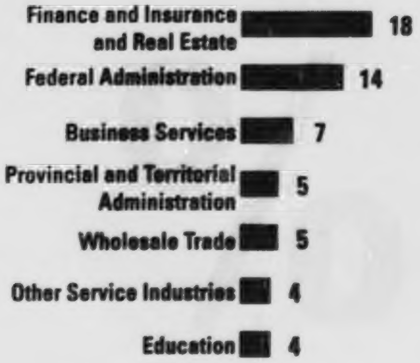
Unemployment Rate

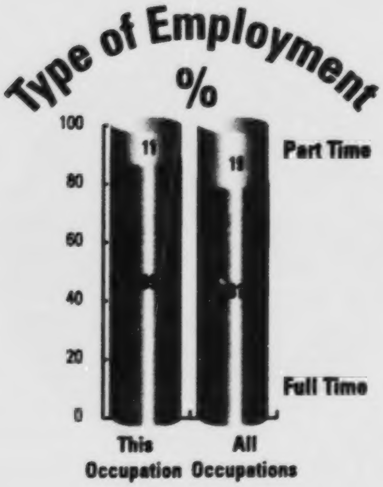


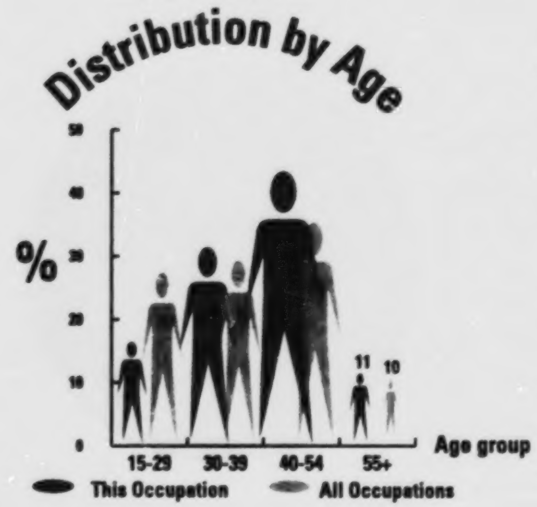
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Administrative and Regulatory Occupations

Where They Work







At Work

People in these occupations work throughout the private and public sectors.

- Administrative officers plan, coordinate and implement work priorities, schedules and procedures.
- Executive assistants carry out administrative procedures, public relations and other activities for boards, legislators, senior government officials and executives.
- Personnel and recruitment officers advertise job vacancies, recruit candidates and help select and reassign employees.
- Property administrators carry out management and rental activities for investment properties on behalf of owners.
- Purchasing agents and officers buy equipment, materials and business services for organizations.
- Conference and event planners plan, organize and coordinate conferences, meetings, festivals and similar events.
- Immigration, unemployment insurance and revenue officers administer and enforce related laws and regulations.

This occupational group also includes justices of the peace and court officers.

Education, Training & Experience

- People in this group have a high school diploma. Most recent entrants have a community college diploma or an undergraduate university degree.
- Personnel and recruitment officers may substitute a personnel administration development program offered by a professional association for college or university programs.
- Conference and event planners may substitute experience in hospitality and tourism or public relations for college and university programs.
- Property administrators may need training or vocational courses in addition to a high school diploma.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 1221, 1225
Part 2 Field of Study Cross-index: U120, C121, C151, C110, T720, T121, T151, C140

NOC 122

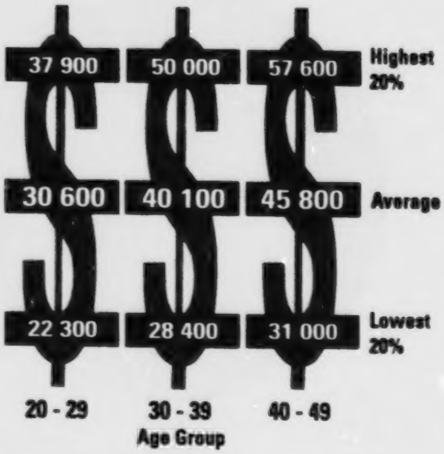
In These Occupations...

- 287,000 people were employed in 1998, an increase of 40.0% from 1988. After employment gains of 25.4% from 1988 to 1993, employment growth slowed to 11.7% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 50% are administrative officers and the rest work in a wide variety of occupations.
- 11% work part-time, compared to an average of 19% for all occupations.
- 10% are self-employed, compared to an average of 17% for all occupations.
- 69% are women, well above the average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 2.9% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for technical, paraprofessional and skilled occupations.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations and for occupations in the business, finance and administration sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities and earnings are both well above the average levels for comparable occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Technological change may eliminate or reduce the need for some of the occupations in this group due to the use of specialized computer systems. Administrative occupations which use specialized skills in data or communications are expected to be areas of growth for this occupational group.
- Employment requirements are expected to increase in these occupations through 2004 across a broad range of industries.

Earnings



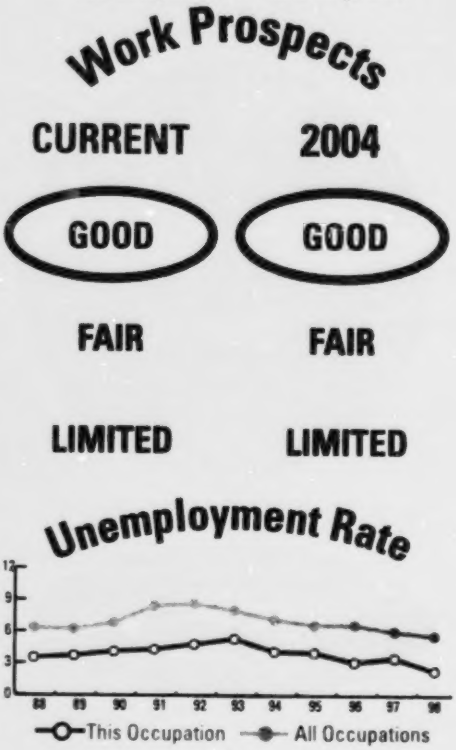
Overall Average for All Ages (15+)

This Occupation	All Occupations
42 300	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

Unemployment Rate



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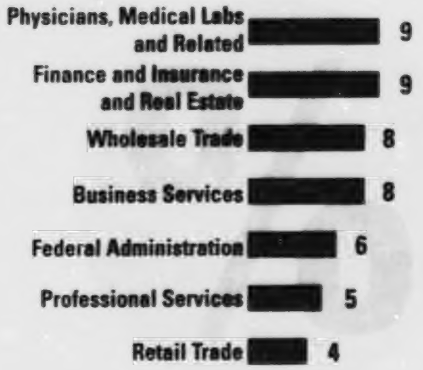
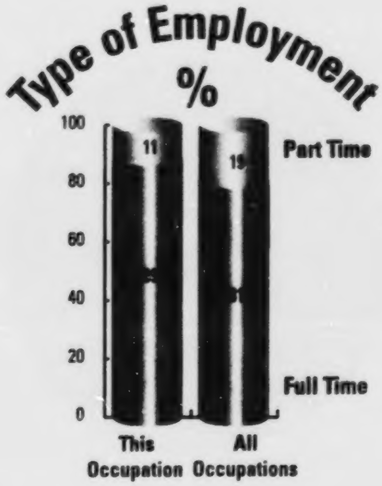
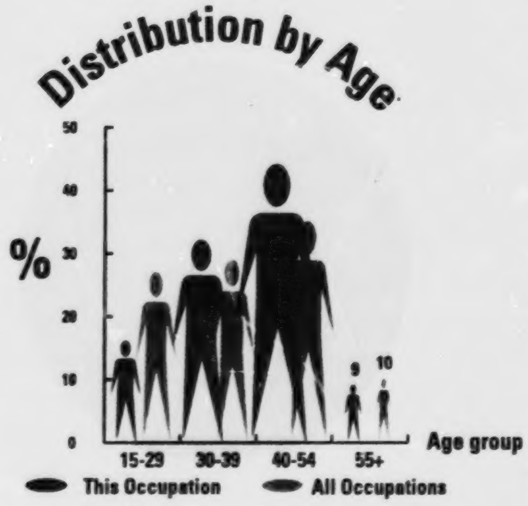
Administrative Officers

Where They Work







At Work

Administrative officers work throughout the private and public sectors. Their duties may require them to:

- oversee and coordinate office administrative procedures and review, evaluate and implement new procedures;
- establish work priorities, delegate work to staff and ensure deadlines are met;
- coordinate and plan for office services such as accommodation, relocations, equipment, supplies, forms, parking, maintenance and security services;
- assist in preparation of operating budgets and maintain inventory and budgetary controls; and
- prepare reports, manuals and correspondence.

Education, Training & Experience

- Administrative officers must have a high school diploma but usually require a community college diploma or university degree in their area of work. Most recent entrants have a community college diploma or an undergraduate university degree.
- They may require a university degree or college diploma in business or public administration.
- They usually need experience in a senior clerical or executive secretarial position related to office administration.
- With experience, they may progress to management positions in administrative services.

In These Occupations...

- 142,000 people were employed in 1998, an increase of 37.9% from 1988. After employment gains of 26.4% from 1988 to 1993, employment growth slowed to 9.1% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 11% work part-time, compared to an average of 19% for all occupations.
- 6% are self-employed, well below the average of 17% for all occupations.
- 79% are women, well above the average of 45% for all occupations. The proportion of women in this occupation has increased significantly over the last ten years.
- the unemployment rate averaged 3.2% from 1996 to 1998, compared to the national average of 6.0%. This rate is

Check out the 'big picture' in "World of Work: Overviews and Trends"

among the lowest for technical, paraprofessional and skilled occupations.

- the average earnings are among the highest for technical, paraprofessional and skilled occupations and for occupations in the business, finance and administration sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since employment opportunities are above average and earnings are well above the average level for comparable occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Administrators with specialized skills in data or communications are expected to be more successful in the employment market.
- Employment requirements are expected to increase in this occupation through 2004 across a broad range of industries.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	36 700	48 300	57 700
Average	29 800	38 700	45 200
Lowest 20%	21 500	27 100	29 100

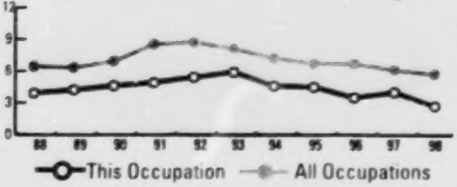
Overall Average for All Ages (15+)

This Occupation	All Occupations
41 800	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

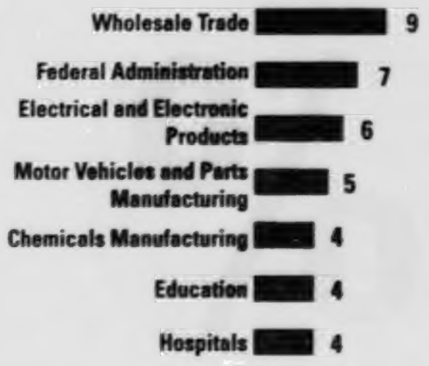
Unemployment Rate



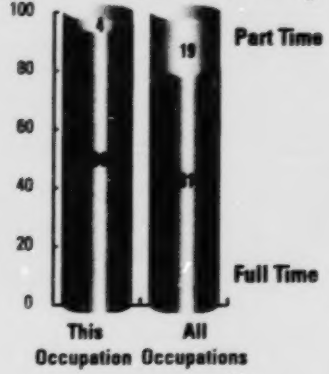
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Purchasing Agents and Officers

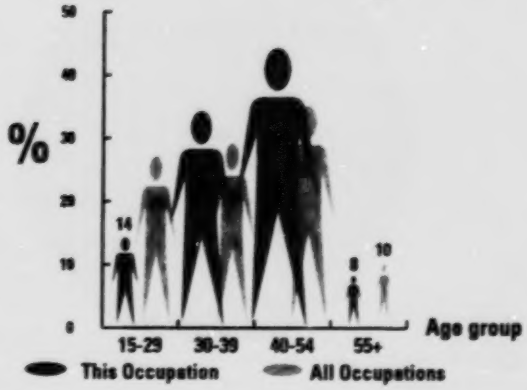
Where They Work



Type of Employment



Distribution by Age



At Work

People in this occupation work throughout the private and public sectors. Their duties may require them to:

- purchase general and specialized equipment, materials and business services;
- assess the needs of their workplace and develop specifications for required equipment, materials and supplies;
- invite tenders, consult with suppliers and review quotations;
- determine contract terms and conditions, and award contracts or recommend contract awards;
- establish delivery schedules, monitor progress and contact clients and suppliers to resolve problems;
- specialize in the purchase of particular materials or business services such as furniture or office equipment; and
- hire, train or supervise clerks.

Education, Training & Experience

- People in this occupation usually require a university degree or college diploma in business administration, commerce or economics. Most recent entrants have a community college diploma or an undergraduate university degree.
- They may need experience as purchasing or administrative clerks.
- Those who specialize in the purchase of particular materials or business services may require a related university degree or college diploma. For example, a purchaser of industrial products may need a bachelor's degree or college diploma in engineering.
- With experience, people in this occupation may move to managerial positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 122
Part 2 Field of Study Cross-index: U120, U820, C121, U420, U840

NOC 1225

In These Occupations...

- 26,000 people were employed in 1998, an increase of 41.1% from 1988. Most of the growth occurred from 1993 to 1998 when employment increased 27.8%. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 4% work part-time, well below the average of 19% for all occupations.
- 2% are self-employed, well below the average of 17% for all occupations.
- 41% are women, compared to an average of 45% for all occupations. The proportion of women in this occupation has increased significantly over the last ten years.
- the unemployment rate averaged 2.8% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for technical, paraprofessional and skilled occupations.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations and for occupations in the business, finance and administration sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since employment opportunities and earnings are both well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Purchasing officers with specialized computer skills in setting up and using computerized inventory control and ordering systems should be more successful in the labour market.
- Employment requirements are expected to increase in this occupation through 2004 across a broad range of industries.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	38 300	52 300	60 600
Average	31 600	42 400	49 100
Lowest 20%	24 600	30 500	35 100

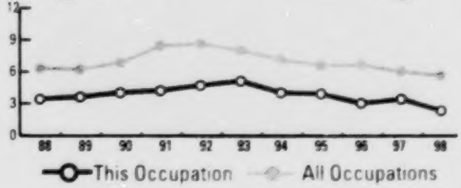
Overall Average for All Ages (15+)

This Occupation	All Occupations
45 000	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

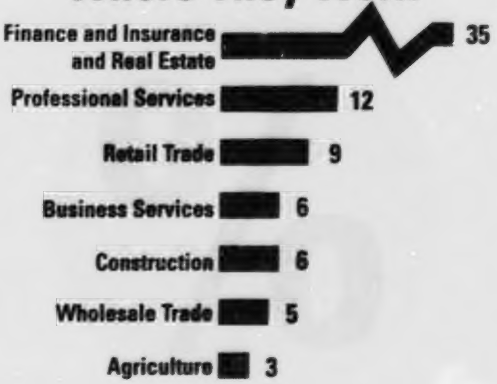
Unemployment Rate



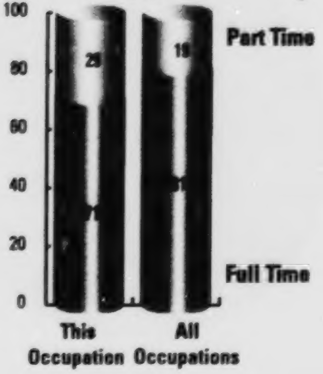
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Finance and Insurance Administrative Occupations

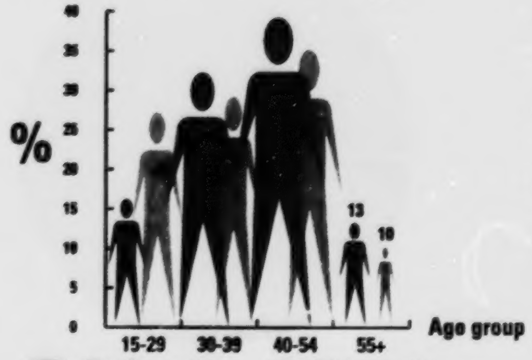
Where They Work



Type of Employment %



Distribution by Age



At Work

People in these occupations work in government and in organizations throughout the private sector, including banks, trust companies, credit unions, insurance companies, real estate agencies, and customs, ship and other brokerage firms.

- Bookkeepers maintain records of accounts and other financial transactions using computerized or manual financial record systems.
- Loan officers evaluate and process credit and loan applications.
- Insurance adjusters investigate insurance claims and determine the amount of loss or damages covered by policies.
- Insurance claims examiners review insurance claims and authorize payments.
- Insurance underwriters evaluate insurance applications to determine insurance risks, premiums and coverage.
- Assessors estimate the value of land, structures and other assets for taxation, grants and regional planning purposes.
- Valuators analyze financial records of businesses to assess competitiveness and estimate market value.
- Appraisers provide valuations of property, buildings, machinery and other items for various clients.
- Customs brokers clear goods through customs on behalf of clients.
- Ship brokers buy and sell yachts, ships, other vessels and ships' cargo space on behalf of clients.

Education, Training & Experience

- People in this group must have a high school diploma. Many recent entrants have a community college diploma or an undergraduate university degree.
- Most require a college diploma, a university degree or other courses related to their field, or a combination of extensive experience and training in their field.
- Assessors, valuators, some appraisers and insurance underwriters need accreditation or professional recognition from their professional associations.
- Customs brokerage business operators require licences from Customs and Excise.

In These Occupations...

- 174,000 people were employed in 1998, an increase of 7.3% from 1988. This reflects an increase of 3.9% from 1988 to 1993 and

Check out the 'big picture' in "World of Work: Overviews and Trends"

3.2% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.

- 59% are bookkeepers; 14% are loan officers; and 11% are insurance adjusters and claims examiners.
- 29% work part-time, well above the average of 19% for all occupations.
- 18% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last 10 years.
- 80% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 2.8% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for technical, paraprofessional and skilled occupations.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations and for other occupations in the business, finance and administration sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities are well above average, although earnings are at the average level.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Increasing use of computerized property management, property evaluation and accounting systems will encourage workers in these occupations to upgrade their computer skills. These changes will have a more unfavourable impact on residential appraisers than on commercial appraisers. With the re-engineering of the workplace, administrators with specialized skills in data or communications should be more successful in the labour market.
- Growing interest in retirement savings plans is creating job opportunities for financial planners.
- Continued restructuring of the financial sector will lead to uncertainty as to the prospects for these occupations.
- Employment requirements are expected to increase in these occupations through 2004 across a broad range of industries with much of the increase in the finance, insurance and real estate industry.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	33 100	42 700	47 100
Average	26 600	33 500	35 800
Lowest 20%	19 300	21 900	21 300

Age Group

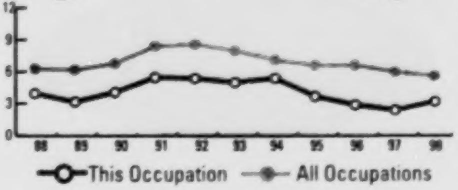
Overall Average for All Ages (15+)

This Occupation	All Occupations
33 500	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

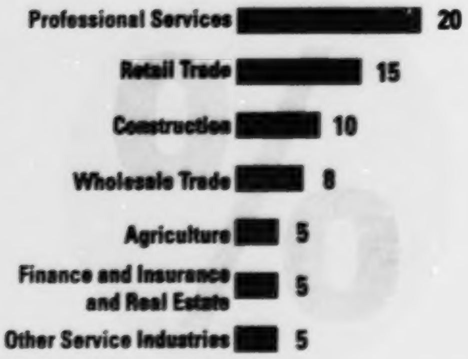
Unemployment Rate

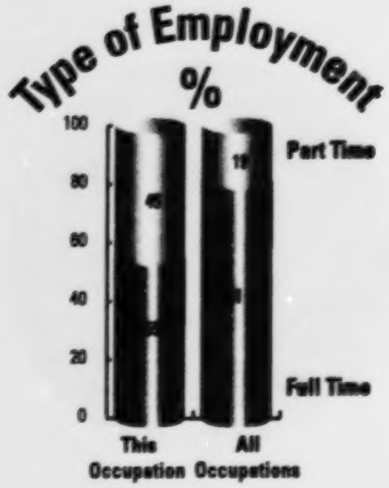


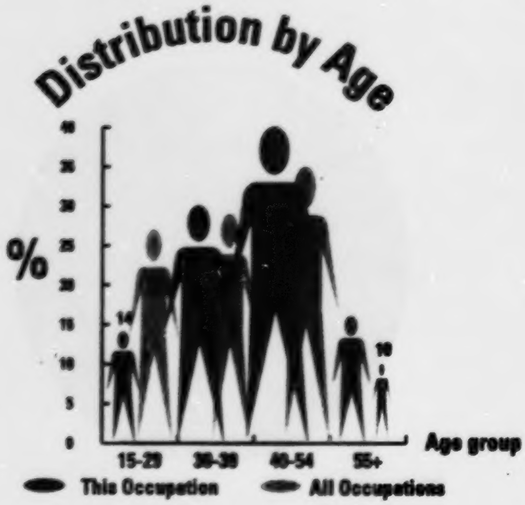
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Bookkeepers

Where They Work







At Work

Bookkeepers work throughout the private and public sectors. They may also be self-employed. Their duties may require them to:

- keep financial records and establish, maintain and balance various accounts using manual and computerized bookkeeping systems;
- post journal entries and reconcile accounts, prepare trial balances of books, maintain general ledgers and prepare financial statements;
- prepare cheques for payrolls and for utility, tax and other bills;
- complete and submit tax remittance forms, workers' compensation forms, pension contribution forms and other government documents;
- prepare tax returns and perform other personal bookkeeping services; and
- prepare statistical, financial and accounting reports.

Education, Training & Experience

- Bookkeepers must have a high school diploma. Many recent entrants have a community college diploma.
- They must complete a college program in accounting, bookkeeping or a related field, or two years of a recognized professional accounting program (such as Chartered Accounting or Certified General Accounting), or a combination of courses in accounting or bookkeeping plus several years' experience as a financial or accounting clerk.
- With additional training, they may progress to professional accounting occupations.

Check out the 'big picture' in
"World of Work: Overviews and Trends"

In These Occupations...

- 103,000 people were employed in 1998, an increase of 0.9% from 1988. However, after rising 2.3% over the 1988 to 1993 period, employment decreased 1.3% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 45% work part-time, well above the average of 19% for all occupations. The proportion of part-time workers in this occupation has increased significantly over the last ten years.
- 27% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in this occupation has increased significantly over the last ten years.
- 95% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 3.6% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the lowest for technical, paraprofessional and skilled occupations and for occupations in the business, finance and administration sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities are above average and earnings are below average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- The use of computerized accounting systems is increasing, even in small businesses. Bookkeepers with specialized computer skills are likely to be more successful in the labour market.
- Employment requirements are expected to increase in this occupation through 2004 across a broad range of industries.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	28 400	34 500	36 800
Average	22 700	26 200	28 300
Lowest 20%	15 200	15 500	15 200

Age Group

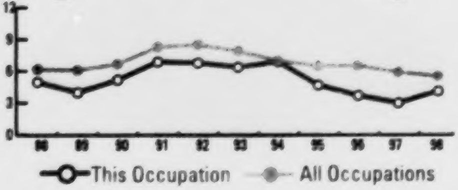
Overall Average for All Ages (15+)

This Occupation	All Occupations
26 500	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate



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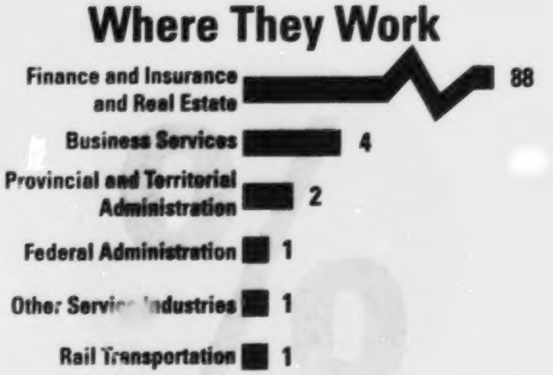
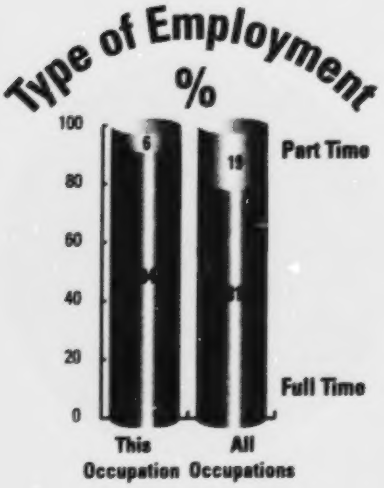
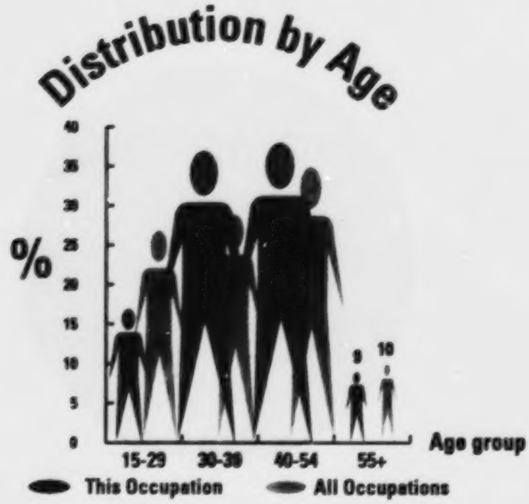
Insurance Adjusters and Claims Examiners







At Work

Insurance adjusters work in the claims departments of insurance companies or as independent adjusters. Insurance claims examiners are employed at head offices or branches of insurance companies.

- Insurance adjusters investigate insurance claims and determine the amount of loss or damages covered by insurance policies for automobiles, homes and other properties. They may examine records and reports and consult with claimants, accident witnesses, doctors and other relevant individuals.
- Insurance claims examiners review, examine, calculate and authorize payments for automobile, fire, life, disability, dental and other claims investigated by insurance adjusters. They may ensure claims are valid and settlements made according to company practices and procedures.

Education, Training & Experience

- People in this occupation must have a high school diploma. Most recent entrants have a community college diploma or an undergraduate university degree.
- They must complete a bachelor's degree, college diploma or some education after high school or have several years' experience as a clerk in a claims department or other general insurance experience.
- They must complete several years' on-the-job training and take insurance industry courses and training programs.
- Independent adjusters require a provincial licence issued by the superintendent of insurance in the province or territory of employment.
- People in this group may gain professional recognition as an associate of the Insurance Institute of Canada by completing educational programs from the Institute or its provincial counterparts.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 123
Part 2 Field of Study Cross-index: U120, U880, C121, U860

NOC 1233

In These Occupations...

- 19,000 people were employed in 1998, an increase of 12.9% from 1988. After declining 13.7% over the 1988 to 1993 period, employment increased 30.7% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 6% work part-time, well below the average of 19% for all occupations.
- 5% are self-employed, well below the average of 17% for all occupations.
- 55% are women, compared to an average of 45% for all occupations.
- the unemployment rate averaged 1.5% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for technical, paraprofessional and skilled occupations and for occupations in the business, finance and administration sectors.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations but are comparable to those for other occupations in the business, finance and administration sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since employment opportunities are well above average and earnings are above the average level for comparable occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Increasingly, insurance adjusters and claims examiners will work with computerized accounting and insurance processing systems. Insurance adjusters with specialized computer skills should be more successful in the labour market.
- Virtually all of the increase in employment requirements through 2004 for this occupation is expected to occur in the finance, insurance and real estate industry.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	37 100	48 100	52 500
Average	30 900	39 500	42 500
Lowest 20%	24 400	29 500	31 000
Age Group			

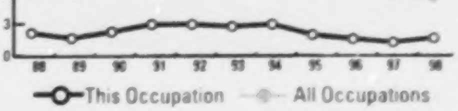
Overall Average for All Ages (15+)

This Occupation	All Occupations
40 500	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

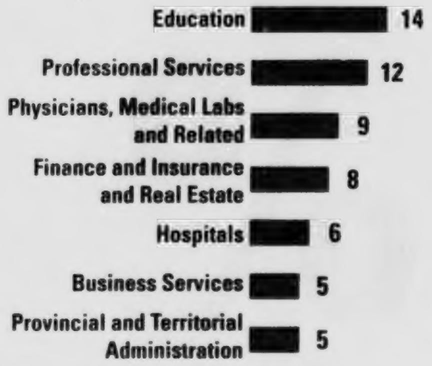
Unemployment Rate



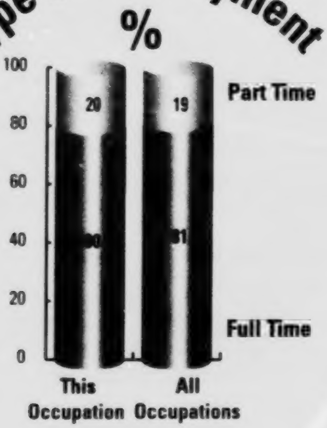
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Secretaries, Recorders and Transcriptionists

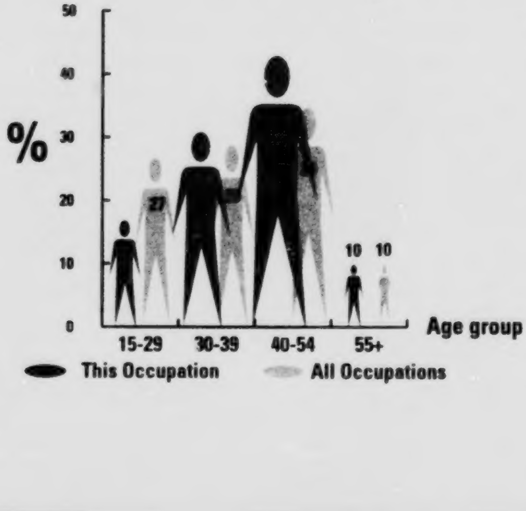
Where They Work



Type of Employment



Distribution by Age



At Work

Secretaries work in government and in organizations throughout the private sector, including law offices, company legal departments, real estate companies, land titles offices, courts, doctors' offices, hospitals, clinics and other medical organizations.

- Secretaries perform administrative duties and clerical activities. This includes using office software on computers and operating other office equipment.
- Court recorders record verbatim proceedings of courts using stenomasks, stenograph machines and computerized recording equipment. They locate quotes to ensure accuracy and transcribe recorded proceedings according to established formats.
- Medical transcriptionists record and transcribe surgical proceedings, medical reports and records from machine dictation or rough notes from medical reports, correspondence and patient information.

This occupational group also includes executive, private and technical secretaries; estate, medical, legal, litigation and real estate secretaries; court reporters and stenographers; and Hansard reporters.

Education, Training & Experience

- Secretaries must have a high school diploma. Many recent entrants have a community college diploma.
- Secretaries (except legal and medical) complete a one- to two-year college or other program or have previous experience.
- Court recorders and medical transcriptionists must complete high school and a college or other program in court reporting or medical transcription.
- Legal secretaries usually must complete a one- to two-year college or other program for secretaries or legal secretaries.
- Medical secretaries usually must complete a one- to two-year college program or other specialized course for secretaries or medical secretaries.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 1242, 1243
Part 2 Field of Study Cross-index: T151, C151, C152, T150, T152, C153, T153, T155

NOC 124

In These Occupations...

- 363,000 people were employed in 1998, a decrease of 24.2% from 1988. Most of the decline occurred from 1993 to 1998, when employment decreased 19.3%. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 78% are non-specialized secretaries; 11% are medical secretaries; and 9% are legal secretaries.
- 20% work part-time, compared to an average of 19% for all occupations.
- 4% are self-employed, well below the average of 17% for all occupations.
- 99% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 5.1% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the lowest for technical, paraprofessional and skilled occupations and for occupations in the business, finance and administration sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited" as a result of large long-term employment losses.
- Over the next five years, this outlook is not expected to change, as employment losses are expected to continue.
- Technological change, in particular the continuing growth of computerized office equipment technologies, may lead to continued decreases in the number of secretaries but will expand the role, and increase the career opportunities, of those who remain.
- Experienced secretaries with specialized skills in office software applications are expected to be more successful in the labour market.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	29 900	35 600	36 900
Average	23 900	29 000	30 200
Lowest 20%	17 800	22 000	22 700

Age Group

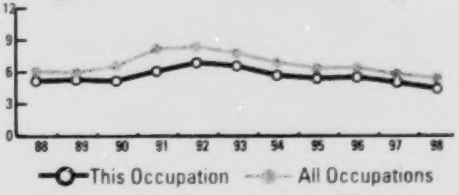
Overall Average for All Ages (15+)

This Occupation	All Occupations
29 100	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

Unemployment Rate



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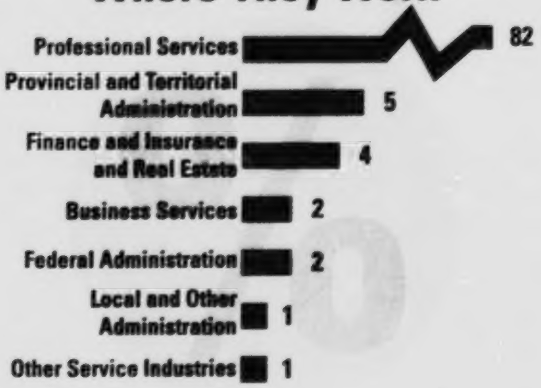
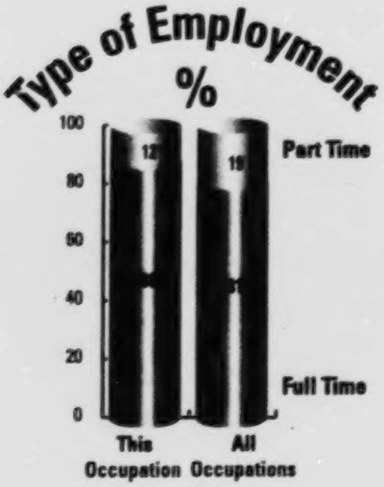
Legal Secretaries

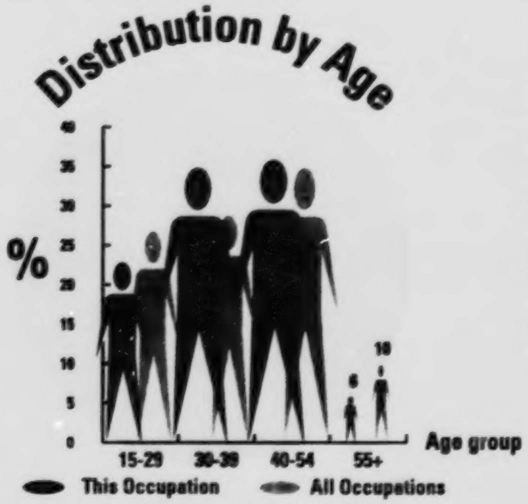
Where They Work



Type of Employment



Distribution by Age



At Work

Legal secretaries work in government, law offices, legal departments of large firms, real estate companies, land title offices and courts at the municipal, provincial and federal levels. Their duties may require them to:

- type correspondence and legal documents such as deeds, wills and affidavits from handwritten copy, shorthand and machine dictation;
- schedule appointments, meetings and conferences;
- set up and maintain filing systems, using their knowledge of legal records and procedures;
- handle confidential materials and documents;
- open and distribute mail and other documents, coordinate the flow of information in-house and with other organizations;
- review and proofread outgoing documents to ensure that they comply with legal procedures and grammar;
- attend court, meetings and conferences to take notes, minutes and dictation; and
- perform other general office work including supervising office workers.

Education, Training & Experience

- Legal secretaries usually must have a high school diploma. Most recent entrants have a community college diploma.
- They usually must complete a one- to two-year college or other program for secretaries or legal secretaries.

In These Occupations...

- 33,000 people were employed in 1998, a decrease of 19.7% from 1988. Most of the decline occurred from 1993 to 1998, when employment decreased 15.1%. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 13% work part-time, compared to an average of 19% for all occupations.
- 3% are self-employed, well below the average of 17% for all occupations.
- 99% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 3.7% from 1996 to 1998, compared to the national average of 6.0%.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 124
Part 2 Field of Study Cross-index: C152, C151, T152, T151, C121

NOC 1242

- the average earnings are among the lowest for technical, paraprofessional and skilled occupations and for occupations in the business, finance and administration sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Limited" as a result of large long-term employment losses.
- Over the next five years, this outlook is not expected to change, as employment losses are expected to continue.
- Increasing use of the Internet and of computerized legal databases, billing systems and other information technologies means that legal secretaries with computer skills will be more successful in the labour market.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	31 500	38 500	40 400
Average	25 900	31 300	33 100
Lowest 20%	19 700	23 900	25 100

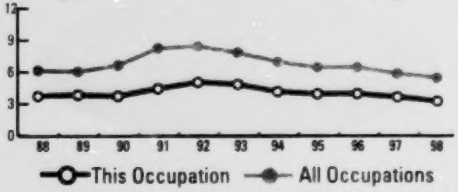
Overall Average for All Ages (15+)

This Occupation	All Occupations
31 000	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

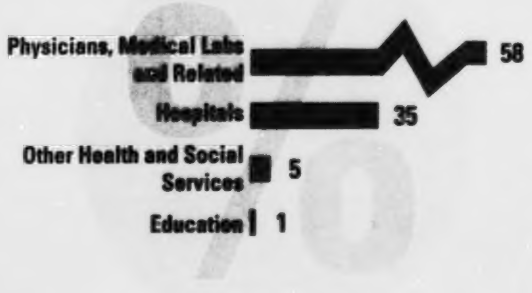
Unemployment Rate

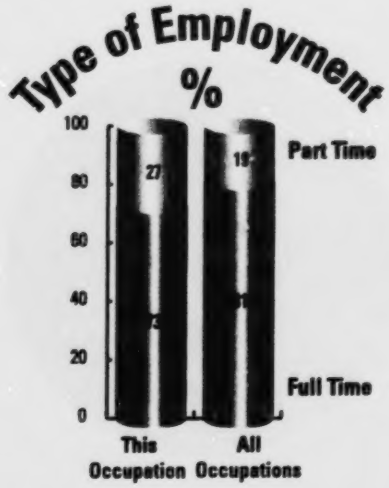


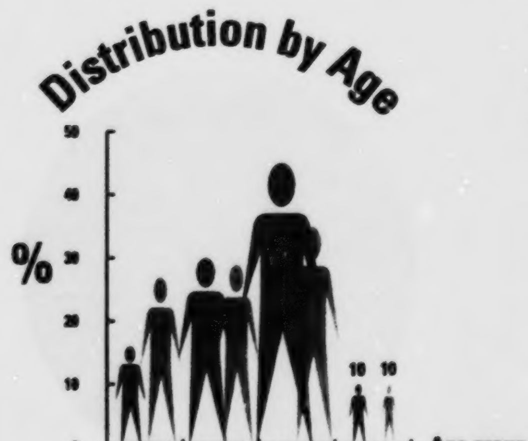
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Medical Secretaries

Where They Work







At Work

Medical secretaries work in doctors' offices, hospitals, medical clinics and other medical settings. Their duties may require them to:

- schedule and confirm medical appointments and receive and communicate messages for doctors and patients;
- type medical records, reports, articles, case histories and correspondence from handwritten notes, shorthand and machine dictation;
- interview patients to complete forms, documents and case histories;
- complete insurance and other claim forms;
- initiate and maintain confidential medical files and records;
- prepare financial statements and handle billing procedures;
- order supplies and maintain inventory; and
- perform other general office work.

Education, Training & Experience

- Medical secretaries must have a high school diploma. Many recent entrants have a community college diploma.
- They usually must complete a one- to two-year college program or other specialized courses for secretaries or medical secretaries.

In These Occupations...

- 40,000 people were employed in 1998, a decrease of 7.5% from 1988. After rising 10.9% over the 1988 to 1993 period, employment decreased 16.5% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 27% work part-time, compared to an average of 19% for all occupations.
- 2% are self-employed, well below the average of 17% for all occupations.
- 99% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 2.6% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for technical, paraprofessional and skilled occupations and for occupations in the business, finance and administration sectors.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 124
Part 2 Field of Study Cross-index: C153, C151, T151, C121, T121

NOC 1243

- the average earnings are among the lowest for technical, paraprofessional and skilled occupations and for occupations in the business, finance and administration sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Limited" as a result of long-term employment losses.
- Over the next five years, this outlook is not expected to change, as employment losses are expected to continue.
- The increasing use of computerized medical records systems and billing systems and of other office equipment technology in medical offices and clinics means that medical secretaries with strong computer skills will have the best employment opportunities.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	30 100	33 200	33 300
Average	23 500	27 700	27 900
Lowest 20%	16 700	21 500	22 000

Age Group

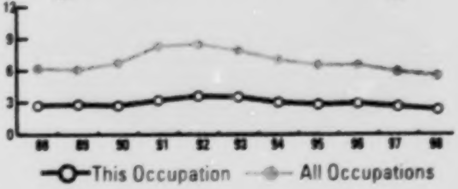
Overall Average for All Ages (15+)

This Occupation	All Occupations
27 400	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

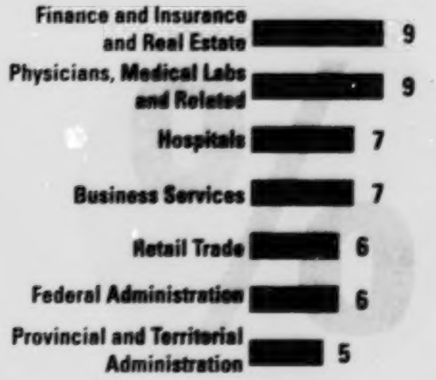
Unemployment Rate



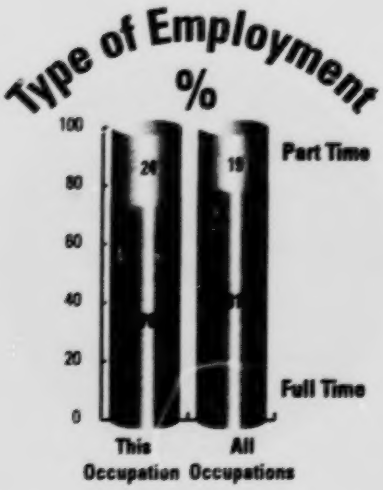
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Clerical Occupations, General Office Skills

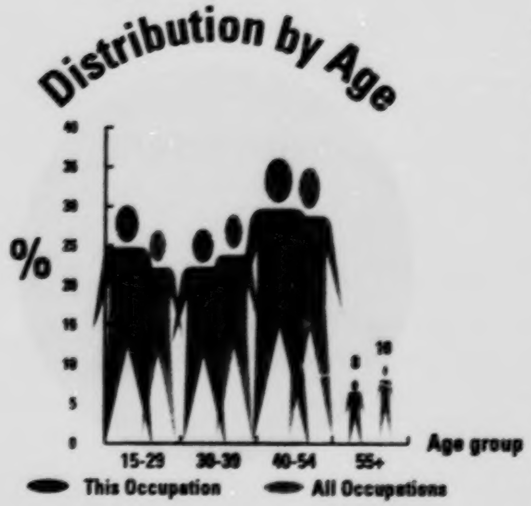
Where They Work



Type of Employment



Distribution by Age



At Work

People in this group work for government and in the private sector.

- General office clerks type and file documents, attend to phone and counter enquiries, open and sort mail and perform other routine office duties.
- Word processers use word processing programs on computers to format and type documents. They also proofread documents and perform other duties such as photocopying and filing.
- Records clerks process, code, classify, store and retrieve documents using computerized and manual information retrieval systems.
- Health records technicians classify, code, cross-reference and store health records and related data in hospitals, clinics and other health care institutions.
- Receptionists greet people, schedule appointments, provide information and perform related clerical duties.

This occupational group also includes administrative and office assistants, hospital admitting clerks, switchboard operators, answering service operators and microfilm records searchers.

Education, Training & Experience

- People in these occupations usually complete a high school diploma, and may complete additional training related to their area of work. Many recent entrants have a community college diploma or an undergraduate university degree.
- General office clerks and receptionists may be required to type or operate word processing programs on computers.
- Word processers must be able to operate word processing software on computers.
- Health records technicians must complete a two- to three-year college or other program in health records management and be certified by the Canadian Health Record Association. This certification allows them to work in all provinces and territories.

Check out the 'big picture' in "World of Work: Overviews and Trends"

In These Occupations...

- 396,000 people were employed in 1998, a decrease of 3.8% from 1988. After rising 0.4% over the 1988 to 1993 period, employment decreased 4.1% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 55% are general office clerks and 33% are receptionists and switchboard operators.
- 24% work part-time, compared to an average of 19% for all occupations.
- 2% are self-employed, well below the average of 17% for all occupations.
- 86% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 6.2% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for occupations in the business, finance and administration sectors.
- the average earnings are among the lowest for occupations with similar education/training requirements and for occupations in the business, finance and administration sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited", since employment opportunities are below the average level for comparable occupations and earnings are well below average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Technological change will affect this occupational group through the use of office equipment technology such as personal computers, electronic mail, automated switchboards and voice mail systems. Managers and other employees increasingly are using these technologies to perform work that clerks used to do for them, reducing the need for clerks. Clerks with specialized computer skills are expected to be more successful in the labour market.
- There may be opportunities through telecommunications in these occupations. There is expected to be a small increase in employment requirements in these occupations through 2004 across a broad range of industries.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	31 700	37 300	39 800
Average	24 900	30 200	32 000
Lowest 20%	18 300	22 400	23 300

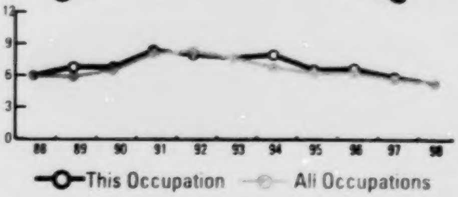
Overall Average for All Ages (15+)

This Occupation	All Occupations
29 900	37 400

Work Prospects

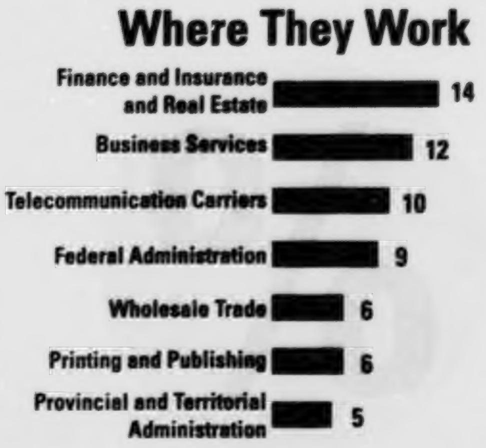
CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

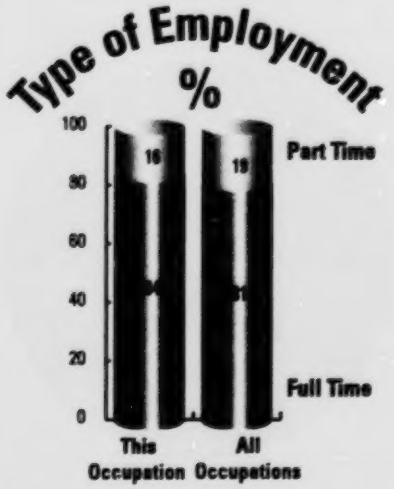
Unemployment Rate

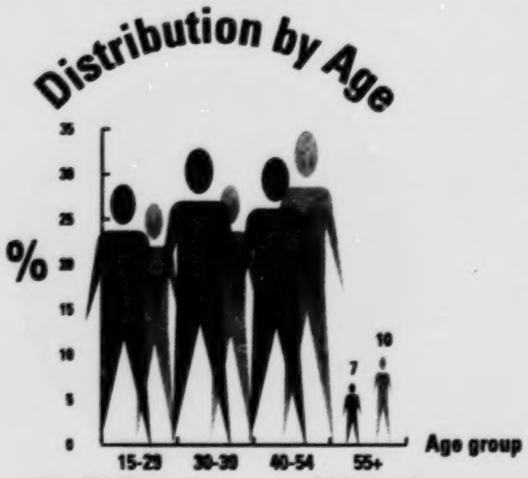


Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Office Equipment Operators







At Work

People in this group work in government and the private sector in organizations such as telephone and commercial printing companies, magazine publishers and typesetting firms.

- Computer operators use computer equipment to produce reports, monitor the operation of computer systems and networks, and schedule their use.
- Data entry clerks type at keyboards and data entry consoles to input data on diskettes, disks and tapes, and maintain libraries of these items.
- Typesetters operate keyboards to enter copy into typesetting systems or use typesetting output equipment to produce text ready to print.
- Desktop publishing operators use desktop publishing software and equipment to design, lay out and produce camera-ready copy.
- Mark-up persons mark copy with computer codes and instructions before typesetting.
- Telephone operators use computerized and conventional telephone systems to advance and assist customers' phone calls.
- Telephone service observers develop and give telephone operator training courses and monitor the work of telephone operators.

Education, Training & Experience

- People in this group must complete some high school or have a high school diploma. Many recent entrants have a community college diploma.
- Typesetters and desktop publishing operators must have a high school diploma and usually require a college program in graphic arts or other training in typography, computer typesetting or desktop publishing.
- Typesetters require typing or data entry experience.
- Mark-up persons usually have a high school diploma.
- Telephone operators receive on-the-job training.
- Telephone service observers must usually have experience as telephone operators.
- With experience, people in this group may progress to supervisory positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 1421, 1422
Part 2 Field of Study Cross-index: C151, C720, C121, C080, T151, T720

NOC 142

In These Occupations...

- 90,000 people were employed in 1998, a decrease of 31.2% from 1988. Most of the decline occurred from 1993 to 1998 when employment decreased 22.7%. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 63% are data entry clerks and 22% are computer operators.
- 16% work part-time, compared to an average of 19% for all occupations. The proportion of part-time workers in these occupations has increased significantly over the last ten years.
- 4% are self-employed, well below the average of 17% for all occupations.
- 74% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 7.6% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for occupations in the business, finance and administration sectors.
- the average earnings are comparable to those for other occupations with similar education/training requirements and for other occupations in the business, finance and administration sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited" as a result of large long-term employment losses.
- Over the next five years, this outlook is not expected to change, as employment losses are expected to continue.
- Restructuring of office work, made possible by new computer technologies, has had an unfavourable impact on employment in this group. Those who continue to be employed in these areas will probably require higher levels of computer skills than in the past.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	31 400	39 900	43 600
Average	25 000	31 800	34 500
Lowest 20%	17 700	22 800	24 400

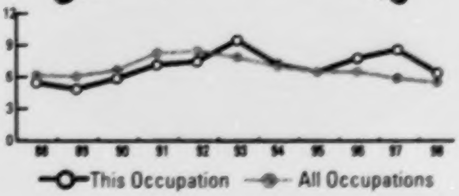
Overall Average for All Ages (15+)

This Occupation	All Occupations
31 800	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

Unemployment Rate



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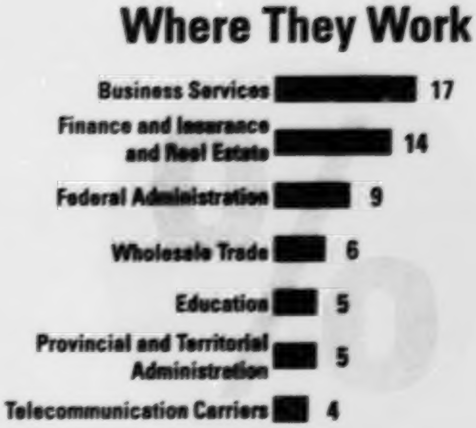
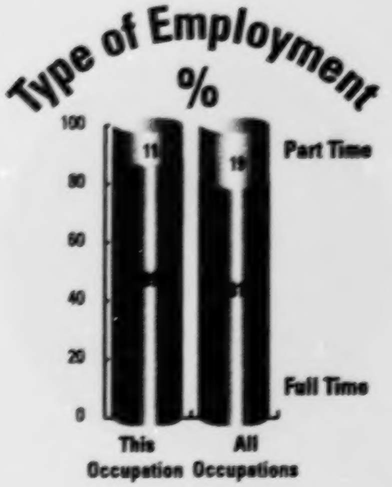
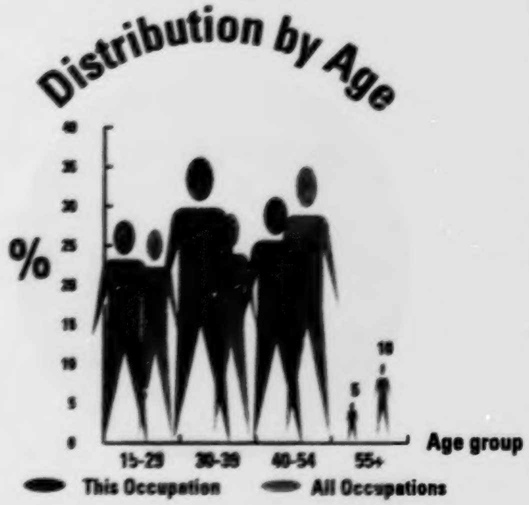
Computer Operators







At Work

Computer operators work in computer centres throughout the public and private sectors. Their duties may require them to:

- operate computer equipment such as terminals, tape drives, disk drives and printers;
- operate master consoles to monitor the operation of computer systems and networks;
- load computer tapes and disks and install software and printer paper and forms;
- operate spreadsheet programs and other types of software to load and manipulate data and produce reports;
- coordinate and schedule the use of computer terminals and networks;
- report computer malfunctions to computer maintenance technicians; and
- distribute computer output to users.

This occupation also includes computer tape librarians, master console operators, network controllers and operators, peripheral operators and system operators.

Education, Training & Experience

- Computer operators usually must have a high school diploma. Many recent entrants have a community college diploma.
- They usually complete college or other courses in computer operations or network administration.
- With additional training and experience, they may progress to supervisory positions.

In These Occupations...

- 20,000 people were employed in 1998, a decrease of 31.5% from 1988. Most of the decline occurred from 1993 to 1998 when employment decreased 21.8%. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 11% work part-time, compared to an average of 19% for all occupations.
- 4% are self-employed, well below the average of 17% for all occupations.
- 47% are women, compared to an average of 45% for all occupations.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 142
Part 2 Field of Study Cross-index: C720, U720, U120, U820, C151

NOC 1421

- the unemployment rate averaged 6.8% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for occupations in the business, finance and administration sectors.
- the average earnings are among the highest for occupations with similar education/training requirements but are comparable to those for other occupations in the business, finance and administration sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Limited" as a result of large long-term employment losses.
- Over the next five years, this outlook is not expected to change, as employment losses are expected to continue.
- Increasing use of microcomputers and networks, rather than mainframe computers, is likely to continue to have an unfavourable impact on demand for computer operators.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	37 500	48 500	53 100
Average	29 500	37 500	40 800
Lowest 20%	21 100	27 000	28 500

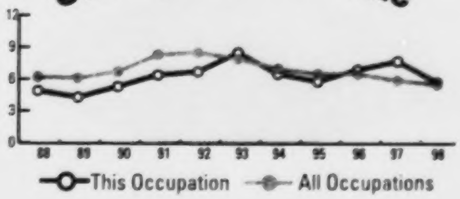
Overall Average for All Ages (15+)

This Occupation	All Occupations
37 500	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

Unemployment Rate



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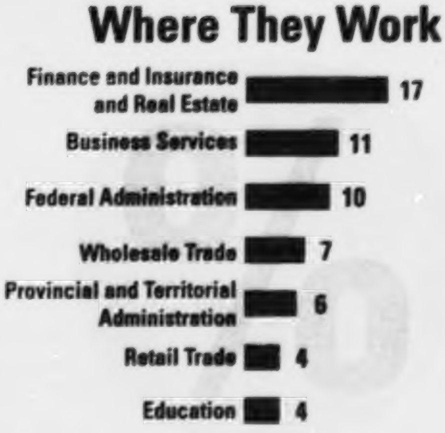
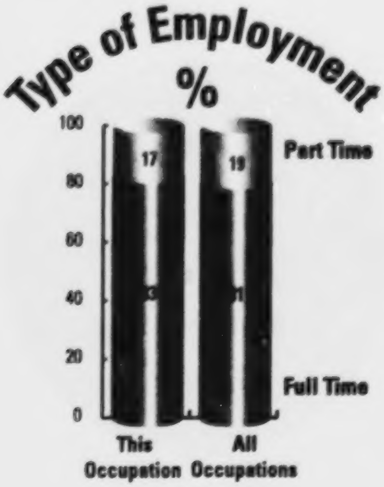
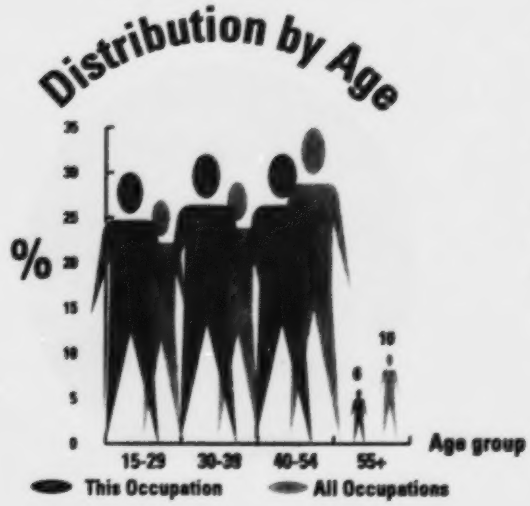
Data Entry Clerks







At Work

Data entry clerks work in offices and computer centres throughout the public and private sectors. Their duties may require them to:

- receive and register invoices, forms, records and other documents for data capture;
- type at keyboards and data entry consoles to input source data onto disks, diskettes and tapes for storage;
- identify, label and store disks, diskettes and tapes;
- verify accuracy and completeness of data; and
- maintain libraries of disks and tapes.

This occupation also includes data control clerks, data processors and payment entry clerks.

Education, Training & Experience

- Data entry clerks usually require a high school diploma. Many recent entrants have a community college diploma or an undergraduate university degree.
- They may need college or other courses in data entry.
- They usually must be able to type or operate data entry equipment.
- With experience, they may progress to supervisory positions.

In These Occupations...

- 56,000 people were employed in 1998, a decrease of 36.6% from 1988. Most of the decline occurred from 1993 to 1998 when employment decreased 27.7%. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 17% work part-time, compared to an average of 19% for all occupations. The proportion of part-time workers in this occupation has increased significantly over the last ten years.
- 3% are self-employed, well below the average of 17% for all occupations.
- 83% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 7.6% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for occupations in the business, finance and administration sectors.

Check out the 'big picture' in
"World of Work: Overviews and Trends"

Related Occupation(s): 142
Part 2 Field of Study Cross-index: C720, C151, T151

NOC 1422

- the average earnings are among the lowest for occupations with similar education/training requirements and for technical, paraprofessional and skilled occupations.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Limited" as a result of large long-term employment losses.
- Over the next five years, this outlook is not expected to change, as employment losses are expected to continue.
- Use of optical scanner systems for data entry and direct entry of data by interviewers, sales clerks and others is likely to decrease demand for data entry clerks. Data entry operators with knowledge of a variety of software programs are expected to be more successful in the labour market.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	28 800	34 900	38 600
Average	23 200	28 500	31 700
Lowest 20%	17 100	21 500	23 200

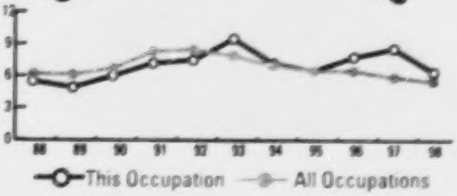
Overall Average for All Ages (15+)

This Occupation	All Occupations
29 000	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

Unemployment Rate



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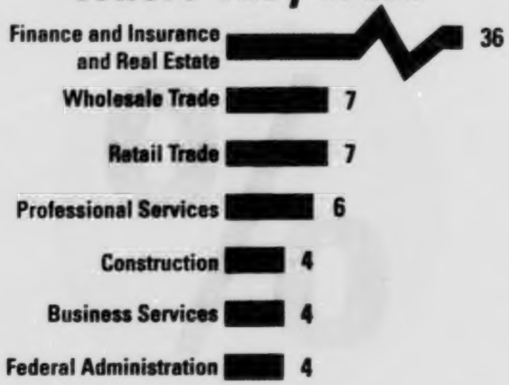
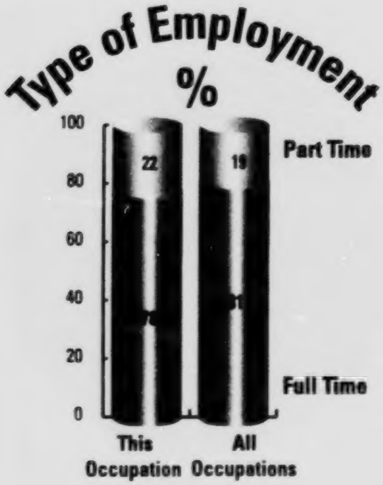
Finance and Insurance Clerks

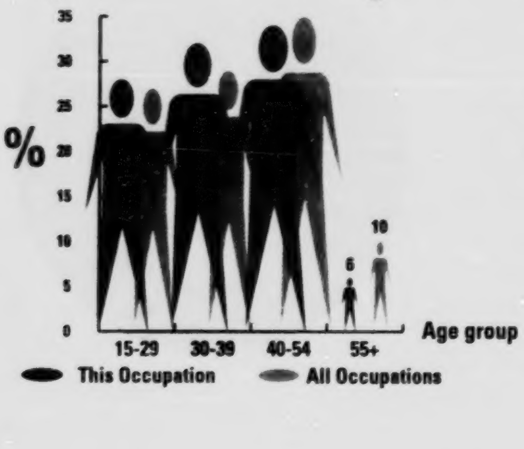
Where They Work



Type of Employment



Distribution by Age



At Work

These clerks work in government and throughout the private sector in payroll administration companies, banks, trust companies, credit unions and collection agencies.

- Accounting clerks calculate, prepare and process bills, invoices and other routine financial records.
- Payroll clerks collect, verify and process payroll data, including the calculation of deductions such as taxes, union dues, insurance and pension plans for employees. They also provide information on payroll matters to employees.
- Customer service representatives and tellers process customers' financial transactions and provide information on banking services.
- Bank clerks maintain documented customer instructions and agreements and files; process non-standard transactions; reconcile and maintain systems; audit transactions; process loans, mortgages and retirement savings plan and other applications; and perform various clerical activities.
- Insurance clerks process claim transactions, policy changes and premium payments; calculate premiums, pension benefits and annuity payments; and perform other clerical activities.
- Other financial clerks perform financial clerical duties in real estate, securities and similar offices.
- Collectors collect payments on overdue accounts and bad cheques, locate debtors and make collection arrangements.

Education, Training & Experience

- These clerks usually must have a high school diploma. Many recent entrants have a community college diploma or an undergraduate university degree.
- Payroll clerks usually have college or other courses in accounting, bookkeeping or payroll administration or experience as financial clerks.
- Bank, insurance and other financial clerks are usually provided with on-the-job training.
- Collectors usually need a collections licence.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 1431, 1433
Part 2 Field of Study Cross-index: C121, C111, C110, T110, T151, C151, T121, T150

NOC 143

In These Occupations...

- 263,000 people were employed in 1998, an increase of 3.3% from 1988. However, after rising 3.7% over the 1988 to 1993 period, employment decreased 0.4% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 56% are accounting and related clerks and 21% are tellers.
- 22% work part-time, compared to an average of 19% for all occupations.
- 2% are self-employed, well below the average of 17% for all occupations.
- 86% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 3.4% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations with similar education/training requirements.
- the average earnings are among the lowest for occupations with similar education/training requirements and for occupations in the business, finance and administration sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities are above average, although earnings are below average.
- Over the next five years, this outlook is not expected to change, since the number of job openings is expected to be matched by the number of qualified job seekers.
- Computerized financial and accounting systems, increased use of automated banking machines and alternate delivery channels for banking will affect the nature of work performed by this group. The automation of financial and payroll systems also poses challenges for this group. Workers with good computer skills are likely to have the best employment prospects.
- Financial service industries face growing customer service expectations, requiring more sophisticated communication with clients from these employees.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	29 500	36 900	38 800
Average	24 400	30 200	31 700
Lowest 20%	18 800	21 900	22 600

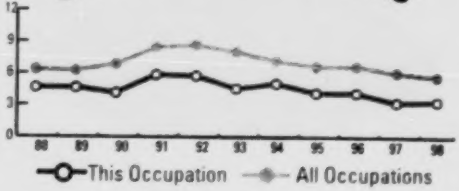
Overall Average for All Ages (15+)

This Occupation	All Occupations
29 700	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate



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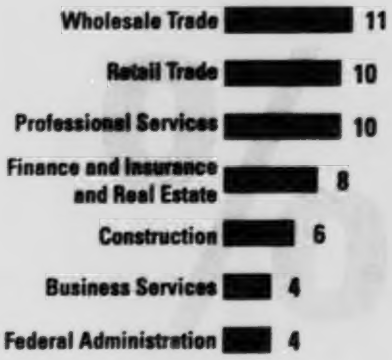
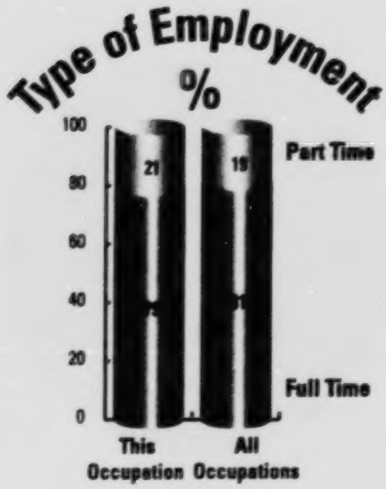
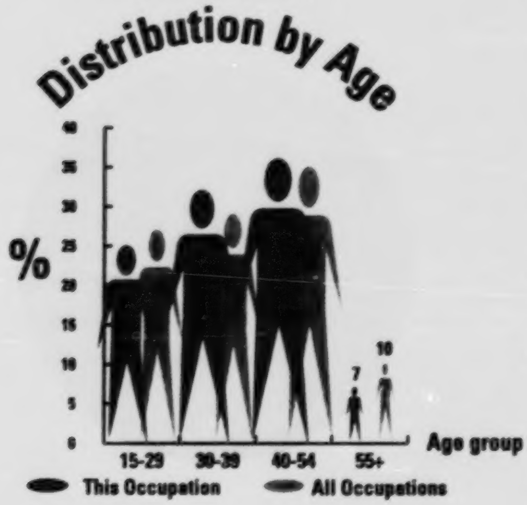
Accounting and Related Clerks

Where They Work







At Work

These clerks are employed throughout the private sector and in government. Their duties may require them to:

- calculate, prepare and issue bills, invoices and other financial statements using manual and computerized systems;
- process, verify and balance financial records and business transactions and enter data in a ledger or computerized system;
- compile budget data and documents based on estimated revenues and expenses and previous budgets;
- calculate costs of materials, overhead and other expenses based on estimates, quotations and price lists; and
- perform other duties such as filing, completing reports and answering clients' questions.

This occupation includes a variety of clerks such as accounts payable and receivable clerks, audit clerks, billing clerks, ledger clerks, tax clerks and tax return preparers.

Education, Training & Experience

- These clerks usually must have a high school diploma. Most recent entrants have a community college diploma or an undergraduate university degree.
- They may be required to complete a college or other course in accounting, bookkeeping or computer operations.
- With additional training and experience, they may advance to supervisory positions or positions requiring more skills, such as bookkeeper.

In These Occupations...

- 148,000 people were employed in 1998, a decrease of 1.3% since 1988. However, after declining 2.1% over the 1988 to 1993 period, employment increased 0.8% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 21% work part-time, compared to an average of 19% for all occupations.
- 3% are self-employed, well below the average of 17% for all occupations.
- 85% are women, well above the average of 45% for all occupations.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 143
Part 2 Field of Study Cross-index: C111, C121, C110, T121

NOC 1431

- the unemployment rate averaged 3.7% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations with similar education/training requirements.
- the average earnings are comparable to those for other occupations with similar education/training requirements but are among the lowest for occupations in the business, finance and administration sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities are above average, although earnings are below average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Use of computerized accounting, inventory and billing systems will increasingly be required of accounting clerks. Good computer skills will be more and more essential.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	30 300	37 400	39 600
Average	24 700	30 400	32 100
Lowest 20%	18 500	21 800	22 100

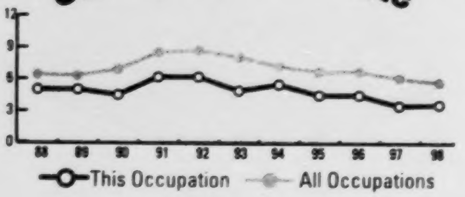
Overall Average for All Ages (15+)

This Occupation	All Occupations
30 100	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

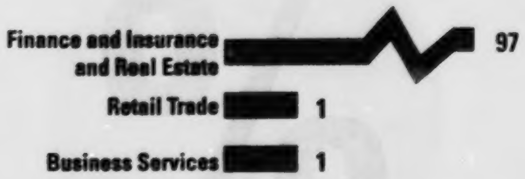
Unemployment Rate

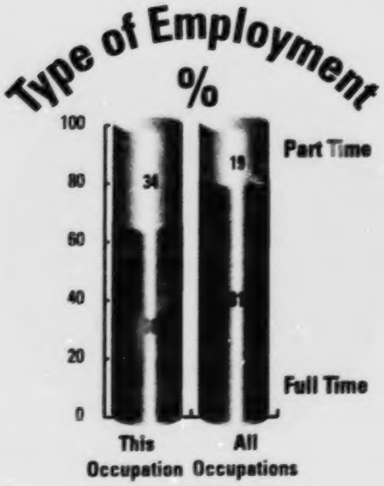


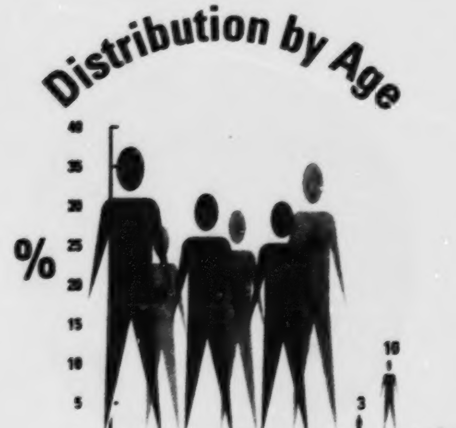
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Tellers, Financial Services

Where They Work







At Work

People in this occupation work in banks, trust companies, credit unions and other financial institutions. Their duties may require them to:

- process customers' financial transactions such as deposits, withdrawals, certified cheques, transfers and credit card payments;
- provide customer services such as opening accounts and savings plans, purchasing bonds and initiating basic investments;
- sell travellers' cheques, foreign currency and money orders;
- balance daily transactions using computer programs, calculators and adding machines;
- sort and file deposit slips and cheques;
- recognize opportunities to promote products and services to customers; and
- answer customers' questions and resolve problems concerning accounts.

Education, Training & Experience

- These people must have a high school diploma. Many recent entrants have a community college diploma or an undergraduate university degree.
- Their employers provide on-the-job training.
- With experience, they may advance to supervisory positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

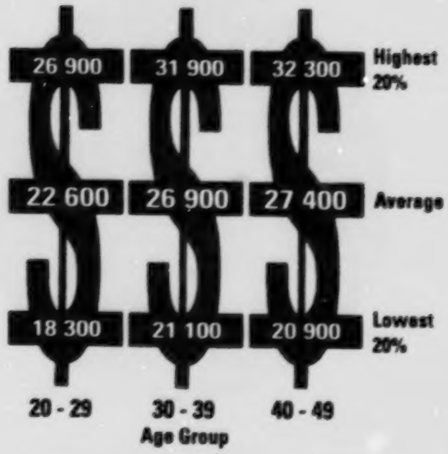
In These Occupations...

- 56,000 people were employed in 1998, a decrease of 5.2% from 1988. After rising 5.6% over the 1988 to 1993 period, employment decreased 10.2% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 34% work part-time, well above the average of 19% for all occupations.
- 1% are self-employed, well below the average of 17% for all occupations.
- 92% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 3.0% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations with similar education/training requirements.
- the average earnings are among the lowest for occupations with similar education/training requirements and for occupations in the business, finance and administration sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Limited" as a result of long-term employment losses.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Major improvements in technology will continue to affect the nature of work performed by this group and reduce the number of people needed to provide traditional and basic transactional services. With the availability of automated banking machines and the emergence of customer-based banking, tellers will increasingly move more to the role of customer service representative, handling a broader range of transactions and tailoring packages of more complex services to meet customer needs.

Earnings



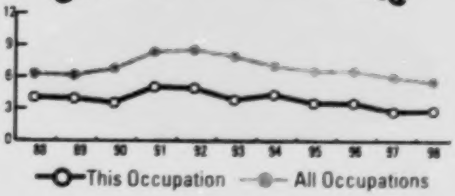
Overall Average for All Ages (15+)

25 900	37 400
This Occupation	**All Occupations**

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

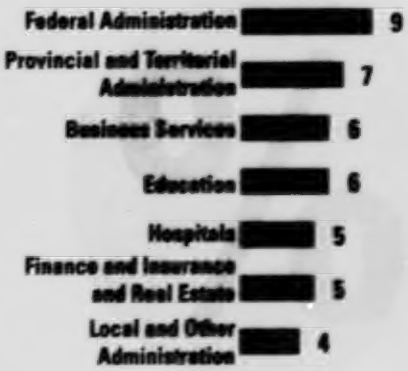
Unemployment Rate

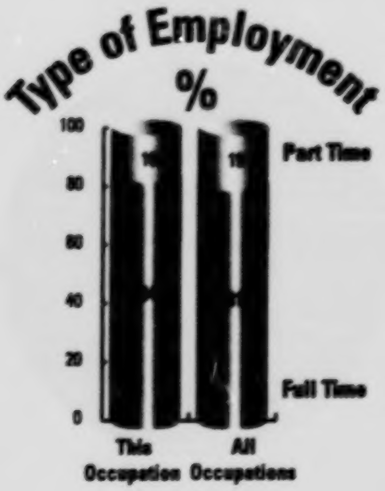


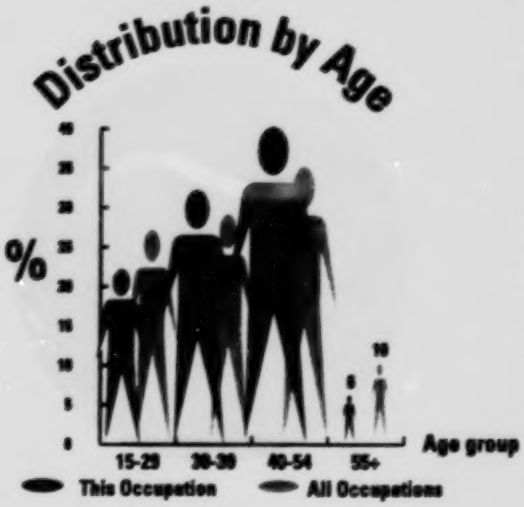
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Administrative Support Clerks

Where They Work







At Work

These clerks work throughout the private sector and in government, including courts.

- Administrative clerks compile, verify, record, authorize and issue licences, permits, applications, contracts and requisitions using manual and computerized processing systems. They prepare reports, maintain inventories and perform related clerical duties.
- Personnel clerks assist personnel officers and human resource specialists. They compile, maintain and process information relating to staffing, recruitment, training, labour relations, performance evaluation, classification and related clerical activities.
- Court clerks prepare court dockets and exhibits and perform other support functions in courtrooms. They also update and maintain court office indexes and files on court actions and decisions.

Education, Training & Experience

- Clerks in this group require different educational levels depending on their occupation. Most recent entrants have a community college diploma or an undergraduate university degree.
- Administrative and personnel clerks usually must complete high school and college or other courses in business or personnel administration. They may need to have some clerical experience and be able to type or operate computers.
- Court clerks must have a high school diploma and are provided with on-the-job training.

In These Occupations...

- 40,000 people were employed in 1998, an increase of 18.1% from 1988. After employment gains of 15.8% from 1988 to 1993, employment growth slowed to 1.9% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 86% are administrative clerks and 10% are personnel clerks.
- 16% work part-time, compared to an average of 19% for all occupations.
- 2% are self-employed, well below the average of 17% for all occupations.

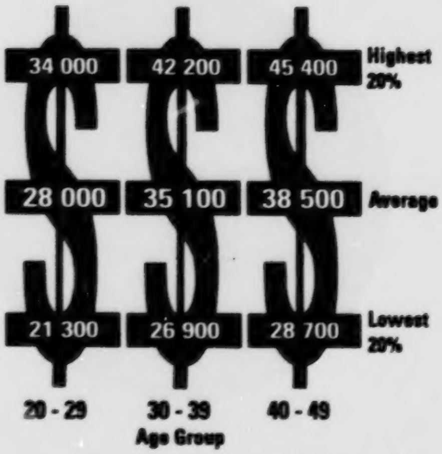
Check out the 'big picture' in "World of Work: Overviews and Trends"

- 87% are women, well above the average of 45% for all occupations.The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 4.8% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations with similar education/training requirements.
- the average earnings are among the highest for occupations with similar education/training requirements but are comparable to those for other occupations in the business, finance and administration sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", as employment opportunities and earnings are both at average levels.
- Over the next five years, the outlook is expected to improve to "Good". The number of job openings is expected to increase more rapidly than the available number of qualified job seekers, due to strong employment growth and a high retirement rate in these occupations.
- This area of clerical work will be less affected by technological change than other occupations, as people in this area interact more with other people. However, it will still be important to maintain up-to-date computer skills.
- As more organizations adopt team principles, personnel clerks will require more complex communications skills for working with others.
- Employment requirements in these occupations are expected to increase through 2004 across a broad range of industries.

Earnings



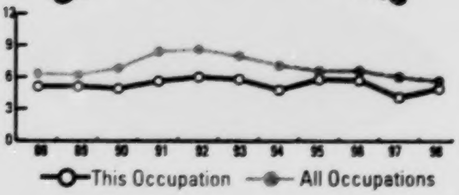
Overall Average for All Ages (15+)

35 900	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	[✓ GOOD]
[✓ FAIR]	FAIR
LIMITED	LIMITED

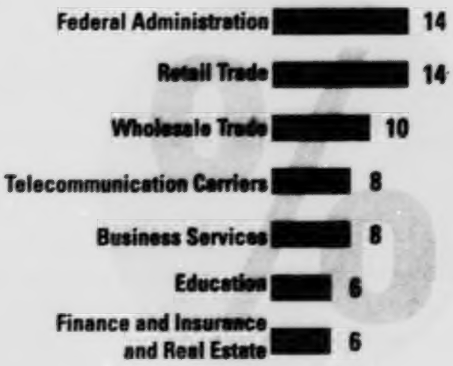
Unemployment Rate

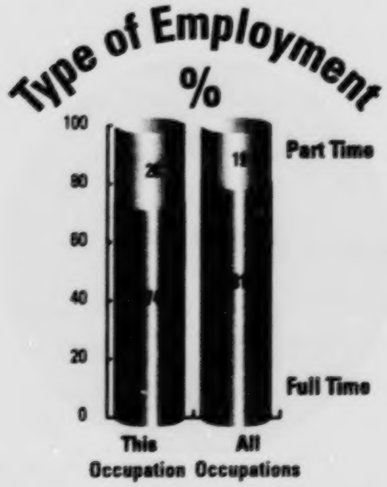


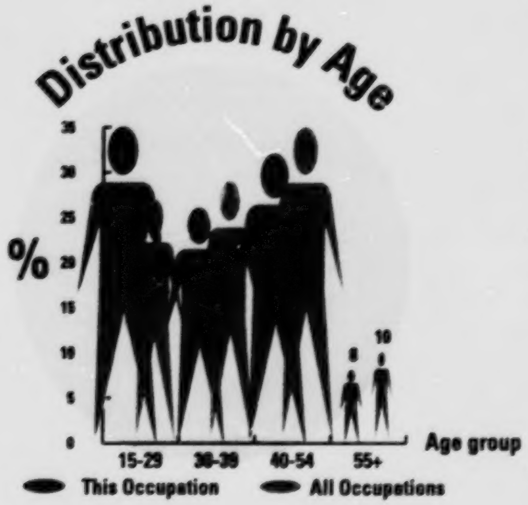
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Library, Correspondence and Related Information Clerks

Where They Work







At Work

These clerks work in government and in private sector organizations such as libraries, newspaper and other publishing firms, retail organizations, insurance companies, telephone and utility companies, and market research and polling firms.

- Library clerks issue, receive, sort and shelve library books and assist with other clerical activities.
- Advertising and correspondence clerks, editorial assistants, publication clerks and proofreaders perform specific clerical duties for newspapers, publishing firms and other organizations.
- Customer service clerks respond to customers' questions and complaints, receive payments and perform related clerical activities for retail, insurance and other organizations.
- Information clerks provide information on services, schedules, rates and other matters in response to telephone and in-person questions.
- Survey interviewers contact individuals to collect data for market research, public opinion polls and other purposes.
- Statistical clerks code and compile interview and other data, and conduct routine analyses of data.

Education, Training & Experience

- Clerks in this group require different educational levels depending on their occupation. Many recent entrants have a community college diploma or an undergraduate university degree.
- Library clerks usually must complete high school.
- Advertising and correspondence clerks, editorial assistants, publication clerks and proofreaders must have a high school diploma. They may need to have additional courses in writing, journalism or a related field and previous clerical or administrative experience.
- Customer service and information clerks usually must complete high school and have some clerical or sales experience.
- Survey interviewers and statistical clerks may require a high school diploma and experience in computer operation. On-the-job training is usually provided.

Check out the 'big picture' in "World of Work: Overviews and Trends"

In These Occupations...

- 70,000 people were employed in 1998, an increase of 7.2% from 1988. However, after rising 19.8% over the 1988 to 1993 period, employment decreased 10.5% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 71% work as customer service, information and related clerks and 17% work as interviewers and statistical clerks.
- 26% work part-time, compared to an average of 19% for all occupations.
- 1% are self-employed, well below the average of 17% for all occupations.
- 77% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 7.9% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for occupations in the business, finance and administration sectors.
- the average earnings are comparable to those for other occupations with similar education/training requirements but are among the lowest for occupations in the business, finance and administration sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- These clerks will increasingly work with computerized databases including those accessed through Internet and Intranets. Growth in these occupations will be driven by demand for survey and statistical staff and by demand in a broad range of jobs linked to electronic information systems such as electronic publishing, electronic shopping and the Internet. Entrants with good computer skills are most likely to be successful in the labour market.
- Employment requirements in these occupations are expected to increase through 2004 across a broad range of industries, with much of the increase in the retail trade, business services and wholesale trade industries.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	32 500	40 800	43 000
Average	25 700	32 000	33 900
Lowest 20%	18 100	23 000	23 400
	Age Group		

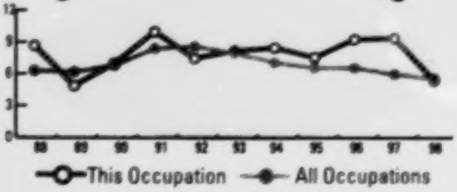
Overall Average for All Ages (15+)

This Occupation	All Occupations
31 700	37 400

Work Prospects

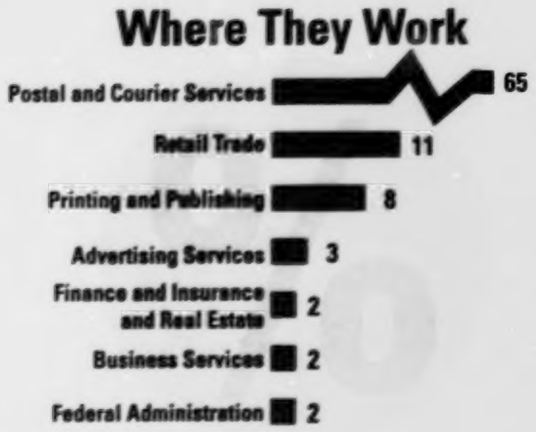
CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

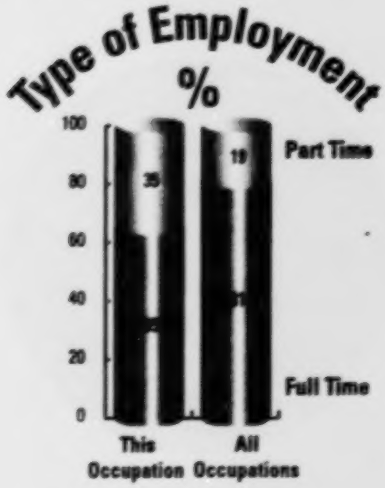
Unemployment Rate

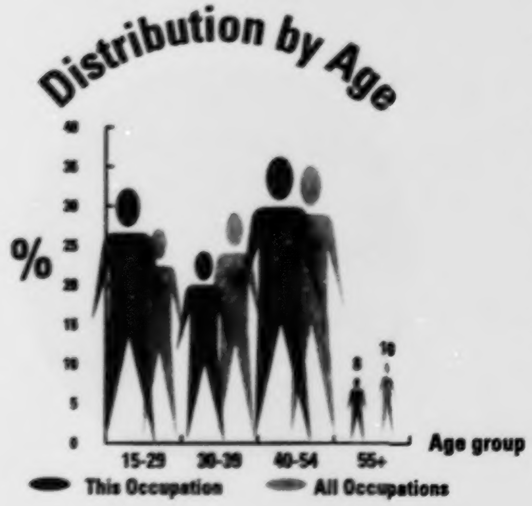


Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Mail and Message Distribution Occupations


Where They Work


Type of Employment


Distribution by Age

At Work

People in this group work for Canada Post Corporation and other government departments, courier and parcel express services and other private sector organizations.

- Postal clerks calculate postage for letters, parcels and registered mail and receive payment at sales counters and postal wickets. They also sell stamps, prepaid mail and money orders, route mail and perform other related clerical activities.
- Mail sorters and mail room clerks sort, label, bag and route mail in mail processing plants and internal mail rooms.
- Letter carriers sort and deliver mail, record delivery of registered mail and collect payments of cash-on-delivery parcels for Canada Post Corporation.
- Couriers and messengers pick up and deliver letters, parcels and other items, travelling on foot, by bicycle or by motor vehicle.
- Flyer and newspaper distributors deliver these items to residences and businesses.

Education, Training & Experience

- People in these occupations require some high school education. Many recent entrants have a high school diploma.
- Mail and postal clerks and mail sorters may, with experience and additional training, progress to supervisory positions.
- Letter carriers receive between two weeks and one month of training at Canada Post Corporation. With experience and additional training, they may progress to supervisory positions.
- Couriers, messengers and newspaper distributors need to have a driver's licence and be eligible for bonding.

In These Occupations...

- 120,000 people were employed in 1998, an increase of 9.7% from 1988. After declining 0.8% over the 1988 to 1993 period, employment increased 10.6% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 40% are couriers and messengers; 36% are mail, postal and related clerks; and 25% are letter carriers.

Check out the 'big picture' in "World of Work: Overviews and Trends"

- 35% work part-time, well above the average of 19% for all occupations.
- 20% are self-employed, compared to an average of 17% for all occupations.
- 34% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 4.7% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations with similar education/training requirements.
- the average earnings are comparable to those for other occupations with similar education/training requirements but are among the lowest for occupations in the business, finance and administration sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities are above the average level for comparable occupations and earnings are below average.
- Over the next five years, the outlook is expected to weaken to "Limited". With a large number of recent graduates or non-completers seeking work in these occupations, the number of qualified job seekers is expected to grow, exceeding the number of job openings, which are expected to decline.
- Cheaper long-distance telephone rates and the increasing use of electronic methods of data transfer, such as fax, e-mail and Web sites, will limit growth in the use of postal and courier services. However, a positive trend is the greater use of electronic, telephone or catalogue shopping which may increase the use of parcel delivery services.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	33 900	41 600	41 100
Average	24 100	32 700	34 700
Lowest 20%	15 100	22 000	26 200

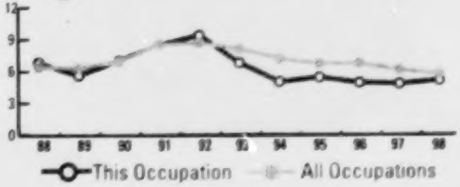
Overall Average for All Ages (15+)

This Occupation	All Occupations
30 600	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	FAIR
LIMITED	[✓ LIMITED]

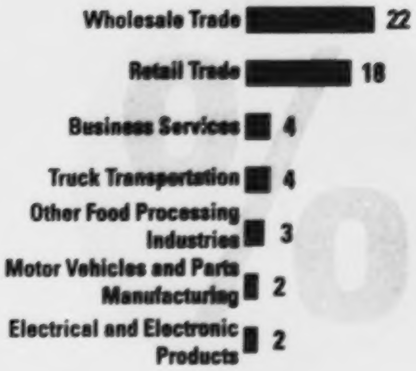
Unemployment Rate

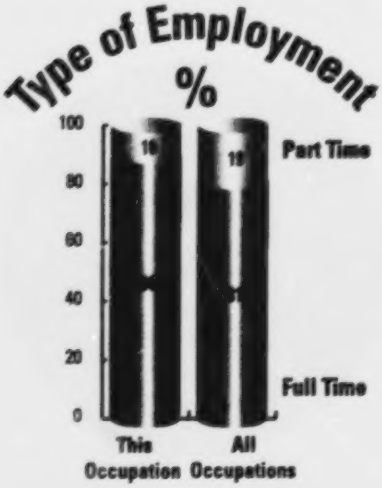


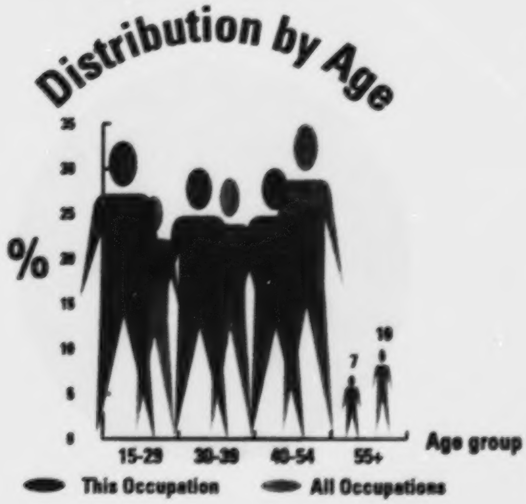
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Recording, Scheduling and Distributing Occupations

Where They Work







At Work

People in this group work in government and throughout the private sector.

- Shippers and receivers ship and receive goods, maintain records and oversee the loading and unloading of goods.
- Storekeepers and parts clerks store and issue parts and supplies for sale and use within their organizations.
- Production clerks prepare work schedules, and coordinate and monitor the movement of materials and the progress of production.
- Purchasing clerks buy materials for organizations.
- Inventory clerks maintain computerized or manual records of materials.
- Dispatchers operate radio and telecommunications equipment to dispatch vehicles, drivers and personnel.
- Radio operators communicate with personnel on ships, aircraft, offshore oil rigs and other remote locations. They also operate Canadian Forces communications equipment.
- Transportation route and crew schedulers prepare route schedules and assign personnel for transit systems and other transportation.

Education, Training & Experience

- People in these occupations usually have a high school diploma and may require some specialized training after high school and some work experience.
- Automotive parts clerks may need a three- or four-year apprenticeship in Manitoba, Alberta, the Northwest Territories, British Columbia and Yukon.
- Inventory clerks may be required to operate computerized inventory systems.
- Police and emergency dispatchers usually need on-the-job training, and those who operate radios usually require a provincial radio operator's certificate.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: C121, C110, C720, T141, C151, T151

NOC 147

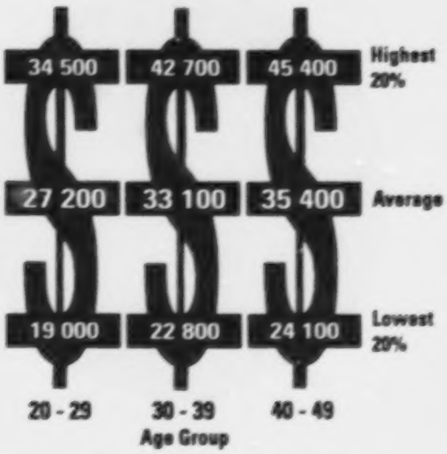
In These Occupations...

- 195,000 people were employed in 1998, an increase of 0.2% from 1988. Ater declining 8.9% over the 1988 to 1993 period, employment increased 10.0% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 48% are shippers and receivers; 19% are purchasing and inventory clerks; and 16% are storekeepers and parts clerks.
- 10% work part-time, compared to an average of 19% for all occupations.
- 1% are self-employed, well below the average of 17% for all occupations.
- 27% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 6.2% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for occupations in the business, finance and administration sectors.
- the average earnings are comparable to those for other occupations with similar education/training requirements and for other occupations in the business, finance and administration sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Computerized inventory control, ordering and scheduling systems—in particular just-in-time systems—will increase the requirements for computer skills in these occupations, but may have a negative impact on employment requirements. Entrants with good computer skills will have the best labour market opportunities.
- Employment requirements in these occupations are expected to increase through 2004 across a broad range of industries, with much of the increase occurring in the wholesale trade and retail trade industry.

Earnings



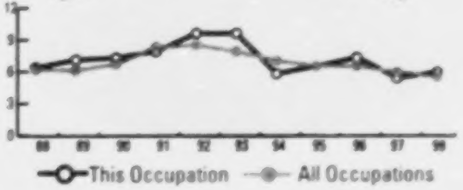
Overall Average for All Ages (15+)

32 300	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate



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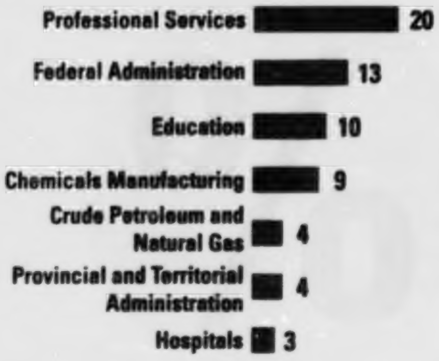
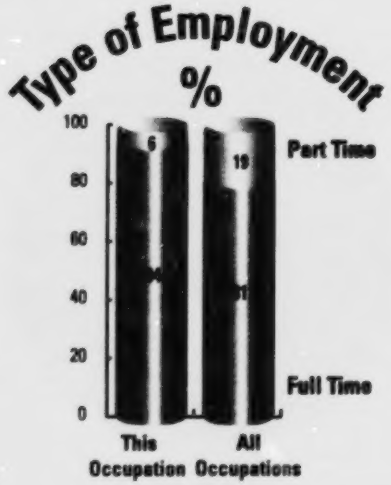
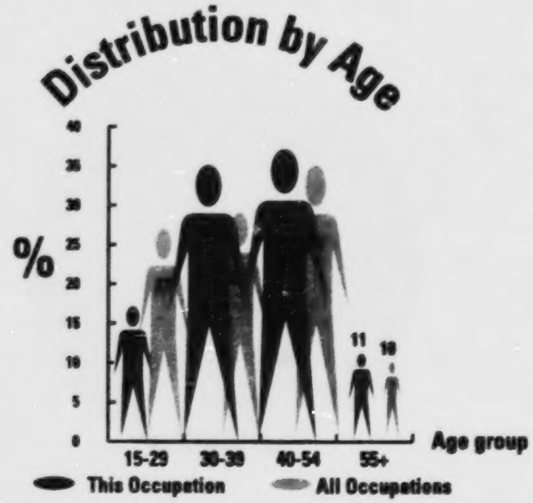
Physical Science Professionals

Where They Work







At Work

These professionals work in government; universities; manufacturing and telecommunications companies; utilities; laboratories; hospitals; the chemical, petrochemical, pharmaceutical and pulp and paper industries; petroleum and mining companies; private consulting companies and other organizations. They may specialize within their fields.

- Physicists conduct basic research of natural phenomena and develop new processes and devices in areas such as electronics, aerodynamics, communications, power utilities, optics and lasers.
- Astronomers research the universe and develop instrumentation and software for astronomical observation and analysis.
- Chemists conduct research and are involved in process control, product development, industrial operations, environmental control, biotechnology and other areas.
- Geologists, geochemists and geophysicists conduct research and exploration to extend knowledge of the earth's surface and subsurface; locate mineral, hydrocarbon and water resources; plan and implement extraction programs; and conduct environmental assessments.
- Meteorologists forecast weather; conduct research into weather, climate and atmosphere; and provide consultation on atmospheric phenomena.
- Metallurgists study the properties and production of metals and alloys; materials scientists research ceramics, composite and other materials; and soil scientists research the composition and evolution of soils.

Education, Training & Experience

- Most of these professionals require a bachelor's degree in their science or a related discipline. Those conducting research or teaching in a post-secondary establishment usually require a master's or doctoral degree. Most recent entrants have an undergraduate university degree.
- Physicists and astronomers require a master's or doctoral degree.
- Geologists and geophysicists may require registration by a provincial or territorial association.

Check out the 'big picture' in
"World of Work: Overviews and Trends"

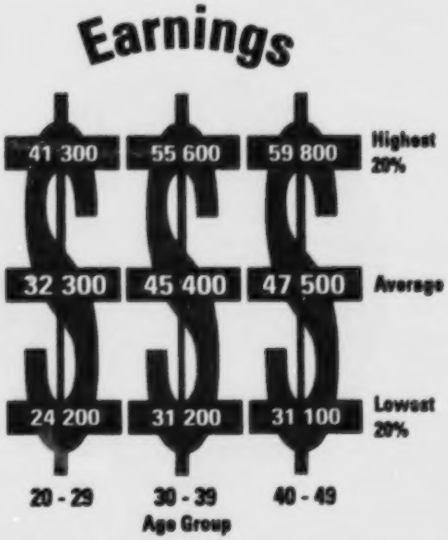
In These Occupations...

- 25,000 people were employed in 1998, a decrease of 15.7% from 1988. Most of the decline occurred from 1993 to 1998, when employment decreased 10.1%. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 48% are chemists and 30% are geologists, geochemists and geophysicists.
- 6% work part-time, well below the average of 19% for all occupations.
- 14% are self-employed, compared to an average of 17% for all occupations.The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 23% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 4.8% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for professional occupations and for occupations in the natural and applied sciences sectors.
- the average earnings are comparable to those for other professional occupations and for other occupations in the natural and applied sciences sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited" as a result of large long-term employment losses.
- Over the next five years, the outlook is expected to improve to "Fair". The number of job openings for physical science professionals is expected to increase more rapidly than the number of qualified job seekers, mostly due to a high retirement rate in these occupations.
- The employment of these professionals is closely related to investment in research and development. The pace of advances in knowledge is very rapid in these fields; consequently, these professionals require continual skill upgrading. There is a recent tendency toward increasing collaboration with specialists in other fields, such as engineering.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the professional services industry.

Earnings



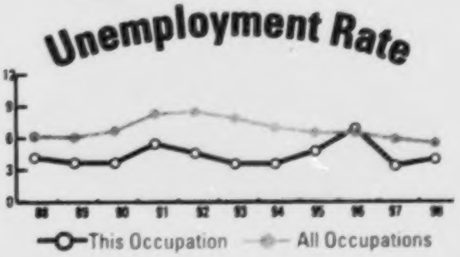
Overall Average for All Ages (15+)

46 000	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	[✓ FAIR]
[✓ LIMITED]	LIMITED

Unemployment Rate



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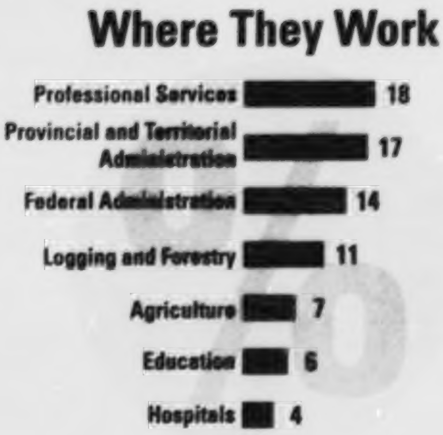
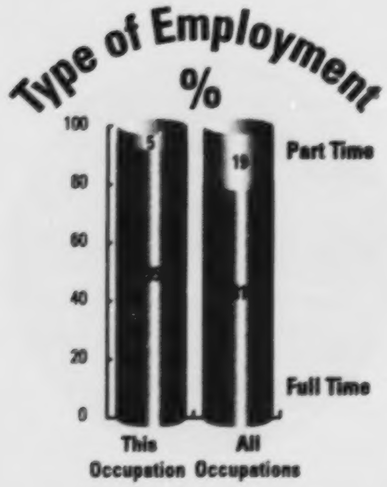
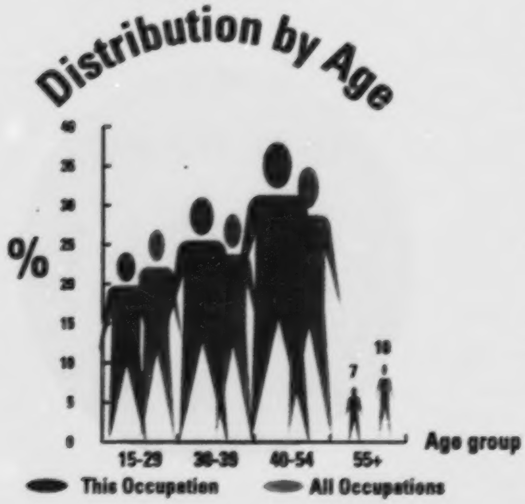
Life Science Professionals







At Work

Professionals in the life sciences work in biotechnology, chemical, pharmaceutical, food, health care, resource, environmental and consulting companies; in government; in educational institutions, including universities and research institutes; and in the forestry and agricultural sectors.

- Biologists conduct studies of the structure and characteristics of humans, plants and animals. They conduct environmental assessment studies, classify plant and animal specimens and carry out basic and applied research.
- Microbiologists and cell and molecular biologists research such areas as bacteria, fungi, viruses, tissues, cells, pharmaceuticals and plant and animal toxins.
- Forestry professionals research, plan, administer and direct forestry management and harvesting programs. They conduct forestry education and extension programs and act as consultants on forestry issues.
- Agricultural representatives, consultants and specialists provide information and advice regarding nutrition to companies, government and the public.

This occupational group also includes consultants and specialists such as geneticists, food and nutrition scientists and toxicologists.

Education, Training & Experience

- People in this group require a university degree in biology or a related discipline. Most recent entrants have an undergraduate or graduate university degree.
- Research scientists in biology or a related field require a master's or doctoral degree to work in the government or private sector. They must have postdoctoral research experience for employment in academic or research institutions.
- Forestry professionals require a forestry or forest engineering degree. Registration as a forester or forest engineer, which requires two years of supervised work and examinations, is required in provinces with forestry associations.
- Agricultural professionals require a bachelor's or master's degree and usually require agrologist (P.Ag.) membership or membership eligibility. In Quebec, they must be members of the Ordre des agronomes du Québec.

Check out the 'big picture' in "World of Work: Overviews and Trends"

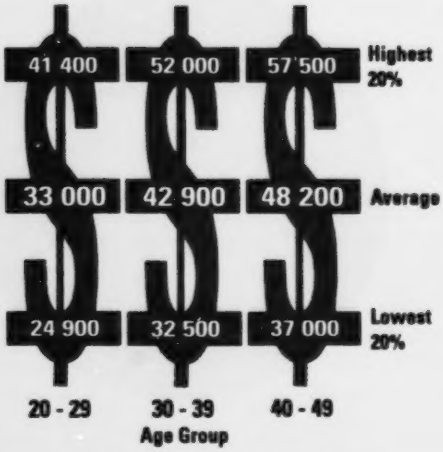
In These Occupations...

- 17,000 people were employed in 1998, an increase of 8.1% from 1988. After employment gains of 5.8% from 1988 to 1993, employment growth slowed to 2.2% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 55% are biologists; 25% are forestry professionals; and 20% are agricultural representatives, consultants and specialists.
- 5% work part-time, well below the average of 19% for all occupations.
- 11% are self-employed, compared to an average of 17% for all occupations.
- 27% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 4.4% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for professional occupations.
- the average earnings are comparable to those for other professional occupations and for other occupations in the natural and applied sciences sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities are average and earnings are above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Government spending restrictions have had a negative impact on several occupations in this group. In particular, spending restrictions on environmental research and monitoring may decrease demand for biologists. Similarly, spending restrictions in drug and food research and monitoring may decrease demand for pharmacologists, toxicologists and food and nutrition scientists. On the other hand, public interest in environmental and health issues may slow or reverse this trend.
- The area of strongest growth for these occupations may be pharmaceuticals and biotechnology, especially agricultural biotechnology. Biotechnology is a relatively small industry, but is growing rapidly.
- Employment requirements in these occupations are expected to increase through 2004 across a broad range of industries, with with much of the increase occurring in the professional services industry.

Earnings



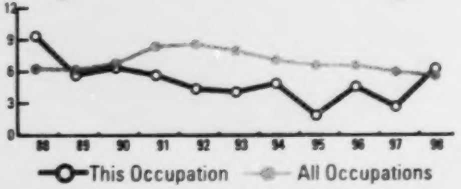
Overall Average for All Ages (15+)

44 100	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

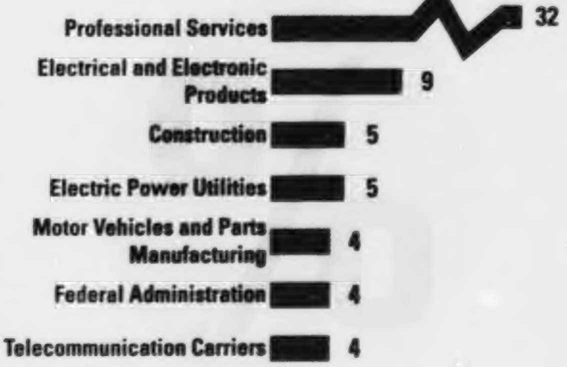
Unemployment Rate



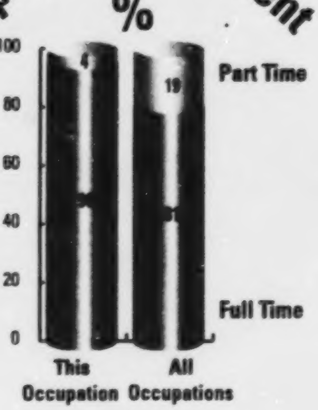
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Civil, Mechanical, Electrical and Chemical Engineers

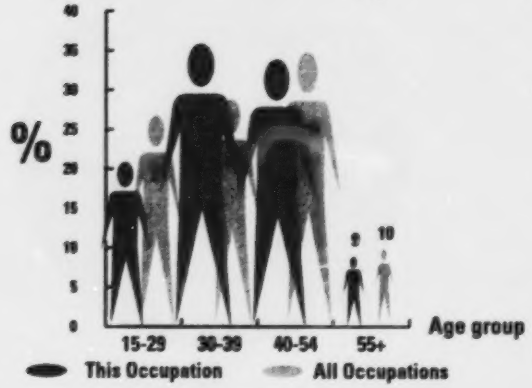
Where They Work



Type of Employment



Distribution by Age



At Work

These engineers work in government; engineering consulting firms; electrical utilities; research and educational institutions; communications companies; the manufacturing, processing and transportation industries; and many other industries.

- Civil engineers plan, design, evaluate, research and manage projects for the construction and repair of structures such as buildings, roads, tunnels, airports, rapid transit facilities, bridges, dams, ports and coastal installations, and systems related to highway and transportation services, water distribution and sanitation.
- Mechanical engineers plan, design, evaluate, research and manage projects related to the operation of machinery and systems for heating, ventilation and air conditioning, power generation, transportation, processing and manufacturing.
- Electrical and electronics engineers plan, design, evaluate, research and manage projects related to electrical generation and distribution networks, electrical machinery and components, and electronic communications, instrumentation and control systems, equipment and components.
- Chemical engineers plan, design, evaluate, research and manage projects related to chemical processes and equipment, oversee the operation and maintenance of processing plants, and perform activities related to quality control, environmental protection, biochemical and biotechnical engineering and other areas.

Education, Training & Experience

- Engineers in this group require a university degree in the discipline of engineering they represent or in a related discipline. Most recent entrants have an undergraduate university degree.
- To practise engineering, they usually require registration as a Professional Engineer (P.Eng./ing.) by a provincial or territorial association of professional engineers.
- In Quebec, they must be members of the Ordre des ingénieurs du Québec.

Check out the 'big picture' in
"World of Work: Overviews and Trends"

Related Occupation(s): 2131, 2132, 2133
Part 2 Field of Study Cross-index: U316, U360, U350, U340, U370, M350, M370, M360, M316, M340

NOC 213

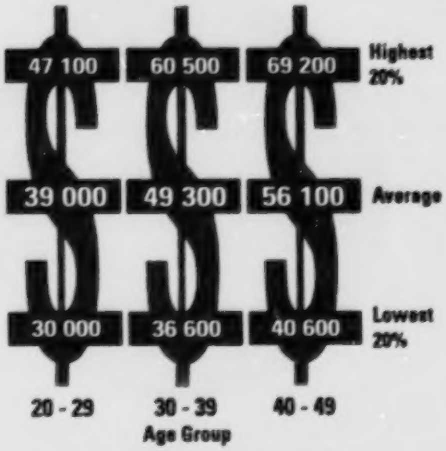
In These Occupations...

- 95,000 people were employed in 1998, an increase of 22.4% from 1988. After employment gains of 13.8% from 1988 to 1993, employment growth slowed to 7.6% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 33% are electrical and electronics engineers; 32% are civil engineers; and 26% are mechanical engineers.
- 4% work part-time, well below the average of 19% for all occupations.
- 12% are self-employed, compared to an average of 17% for all occupations.
- 9% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 2.5% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the highest for professional occupations and for occupations in the natural and applied sciences sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities and earnings are both well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- The rapid pace of technological change in engineering means that these professionals must be committed to continually upgrading their skills. Often these will be skills in another area of engineering or in management.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the professional services and electrical and electronic products industries.

Earnings



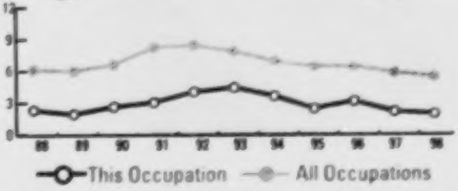
Overall Average for All Ages (15+)

51 200	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

Unemployment Rate



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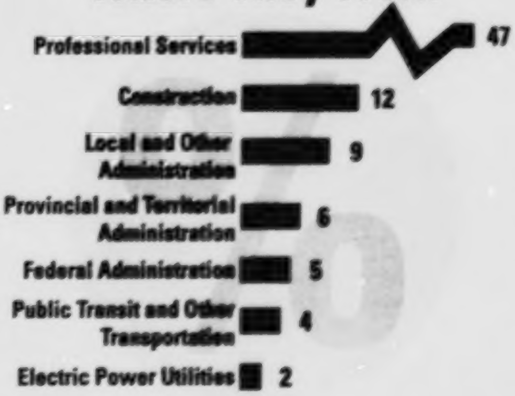
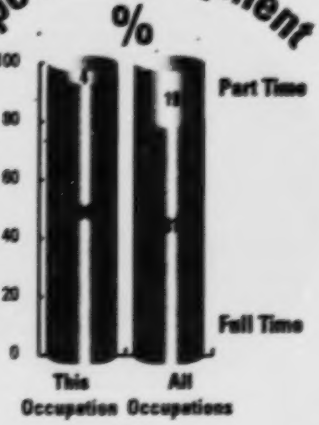
Civil Engineers

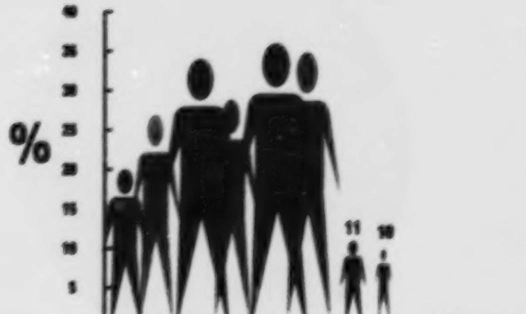
Where They Work



Type of Employment



Distribution by Age



At Work

Civil engineers work for engineering consulting companies, construction companies, municipal and other levels of government, and many other industries. They may also be self-employed.

- They plan, design, develop and manage a variety of major civil egineering projects including the construction and repair of buildings, roads, airports, railways, bridges, dams, ports and water distribution and sanitation systems.
- They may specialize in foundation analysis, building and structural inspection, surveying and municipal planning.
- They often work with professionals from other fields, gaining knowledge and skills that allow them to practise in associated areas of science, engineering, sales, marketing and management.

Education, Training & Experience

- Civil engineers require a university degree in civil engineering or in a related field of engineering. Most recent entrants have an undergraduate university degree.
- They are required to register as a Professional Engineer (P.Eng./ing.) with a provincial or territorial association of professional engineers to secure employment and practise in their field.
- For those with an undergraduate degree from an accredited program, eligibility requirements for registration as a P.Eng./ing. include four years' supervised experience (two in Quebec) and successful completion of a professional practice examination.
- For those without a degree from an accredited program, eligibility for registration as a P.Eng./ing. requires a term of supervised employment and successful completion of technical examinations and a professional practice examination.
- With experience, they can progress to supervisory and senior positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 213
Part 2 Field of Study Cross-index: U350, U370, U316, U360, C300

NOC 2131

In These Occupations...

- 30,000 people were employed in 1998, an increase of 19.8% from 1988. After employment gains of 15.4% from 1988 to 1993, employment growth slowed to 3.7% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 4% work part-time, well below the average of 19% for all occupations.
- 15% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in this occupation has increased significantly over the last ten years.
- 9% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 3.6% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are comparable to those for other professional occupations and for other occupations in the natural and applied sciences sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since employment opportunities and earnings are both above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Continuing economic growth may lead to an increase in large-scale construction projects, boosting the demand for civil engineers.
- Globalization of civil engineering services may mean that many opportunities in large-scale construction projects will be outside Canada.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the professional services and construction industries.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	43 500	56 900	66 700
Average	36 900	46 100	54 300
Lowest 20%	28 700	34 700	38 900

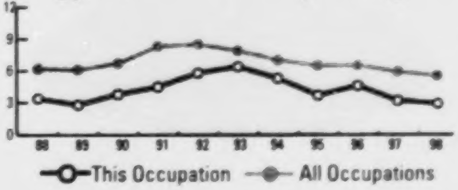
Overall Average for All Ages (15+)

This Occupation	All Occupations
49 500	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

Unemployment Rate



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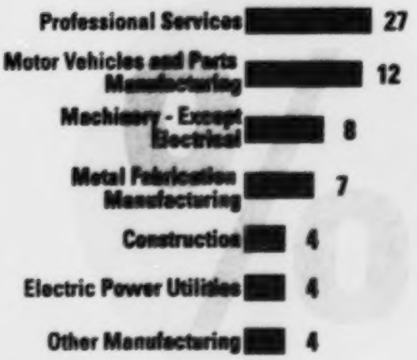
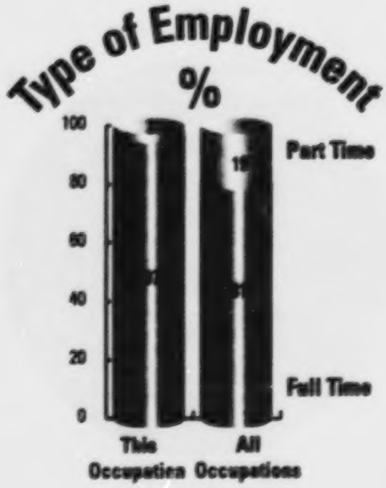
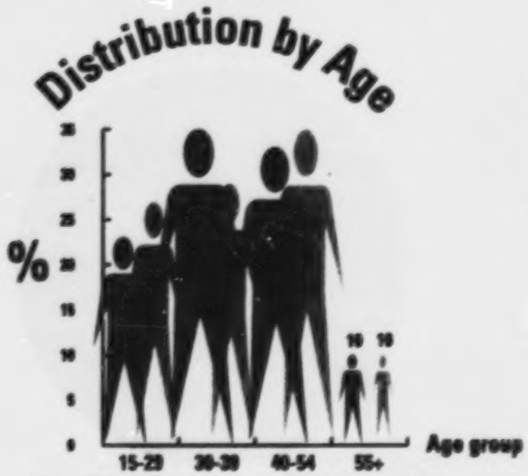
Mechanical Engineers

Where They Work







At Work

Mechanical engineers work for consulting firms, power generating utilities and a wide range of manufacturing, processing and transportation industries. They may also be self-employed.

- They research, design and develop machinery and systems for heating, ventilating and air conditioning, power generation, transportation, processing and manufacturing.
- They have duties related to the evaluation, installation, operation and maintenance of mechanical systems.
- They often work with professionals from other fields, gaining knowledge and skills that may allow them to practise in associated areas of science, sales, marketing and management.
- They also work closely with civil, electrical, aerospace, chemical, industrial and other engineers, resulting in job mobility between some fields of specialization in these disciplines.

Education, Training & Experience

- Mechanical engineers usually require a university degree in mechanical engineering or in a related field of engineering. Most recent entrants have an undergraduate university degree.
- They are required to register as a Professional Engineer (P.Eng./ing.) with a provincial or territorial association of professional engineers to secure employment and practise in their field.
- For those with a degree from an accredited program, eligibility requirements for registration as a P.Eng./ing. include four years' supervised experience (two in Quebec) and successful completion of a professional practice examination.
- For those without a degree from an accredited program, eligibility for registration as a P.Eng./ing. requires a term of supervised employment and successful completion of technical examinations and a professional practice examination.
- With experience, they can progress to supervisory and senior positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

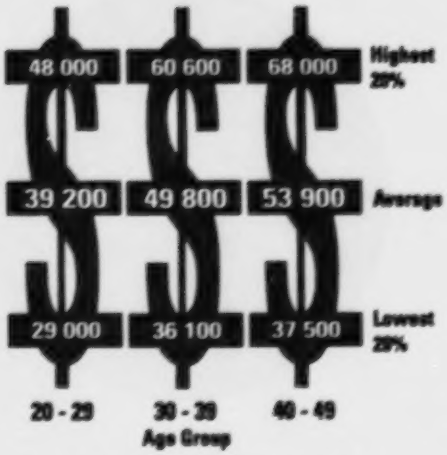
In These Occupations...

- 25,000 people were employed in 1998, an increase of 31.9% from 1988. This reflects an increase of 15.8% from 1988 to 1993 and 13.9% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 3% work part-time, well below the average of 19% for all occupations.
- 14% are self-employed, compared to an average of 17% for all occupations.
- 7% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 2.3% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations in the natural and applied sciences sectors.
- the average earnings are among the highest for professional occupations but are comparable to those for other occupations in the natural and applied sciences sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since employment opportunities and earnings are both well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- The growing use of electronics in machinery and process control will lead to an increased overlap between mechanical and electrical and electronic engineering. Many mechanical engineers will need skills in this area.
- Labour market conditions for mechanical engineers are highly dependent on the success of Canadian manufacturing industries. Manufacturing is a strongly cyclical industry whose results depend on the exchange rate and on the strength of foreign economies, as well as on the strength of Canadian domestic economic conditions.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the professional services and non-electrical machinery industries.

Earnings



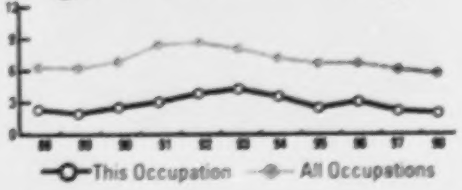
Overall Average for All Ages (15+)

50 000	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

Unemployment Rate



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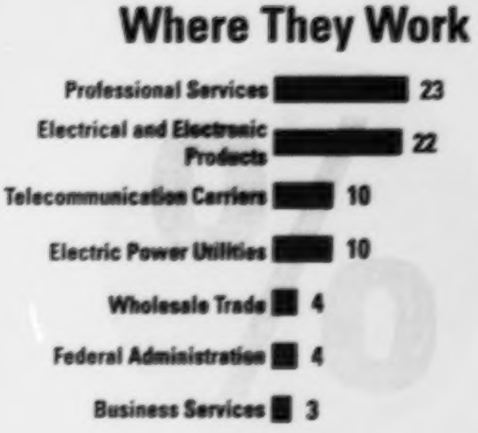
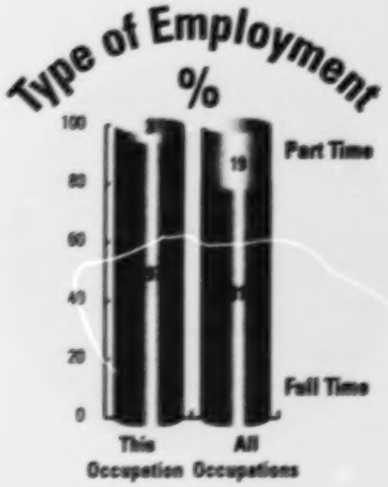
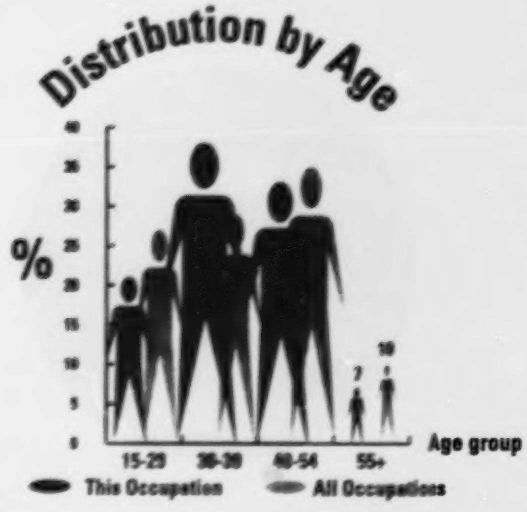
Electrical and Electronics Engineers







At Work

These engineers work in electrical utilities; communications companies; firms manufacturing electrical and electronic equipment; consulting firms; a wide range of manufacturing, processing and transportation industries; and government.

- They design, plan, research, evaluate and test the operation and performance of electrical and electronic equipment and systems.
- They may specialize in a number of areas including electrical design for residential, commercial or industrial installations; electrical power generation and transmission; communications systems; instrumentation and control systems; analog and digital signal processing; integrated circuits; microwave technology; film optics; computers; lasers; microprocessors and radio astronomy.
- They often work with professionals from other fields, gaining knowledge and skills that may allow them to practise in associated areas of science, engineering, sales, marketing or management.

Education, Training & Experience

- Electrical and electronics engineers need a university degree in electrical or electronics engineering or in a related field of engineering. Most recent entrants have an undergraduate university degree.
- They are required to register as a Professional Engineer (P.Eng./ing.) with a provincial or territorial association to secure work in their field.
- For those with an undergraduate degree from an accredited program, eligibility requirements for registration as a professional engineer include at least four years' supervised experience (two in Quebec) and successful completion of a professional practice examination.
- For those without a degree from an accredited program, eligibility for registration as a professional engineer requires a term of supervised employment and the successful completion of technical examinations and a professional practice examination.
- With experience, they can progress to supervisory and senior positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

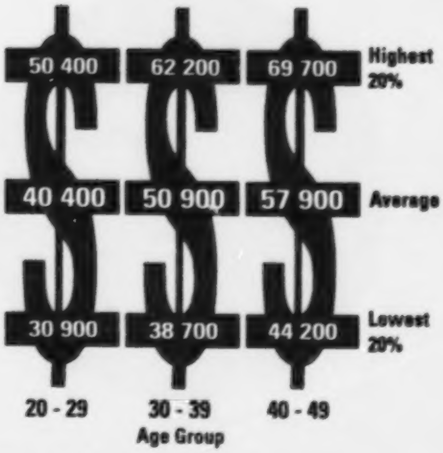
In These Occupations...

- 32,000 people were employed in 1998, an increase of 20.5% from 1988. After employment gains of 16.2% from 1988 to 1993, employment growth slowed to 3.7% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 3% work part-time, well below the average of 19% for all occupations.
- 10% are self-employed, compared to an average of 17% for all occupations.
- 9% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 1.6% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for professional occupations and for occupations in the natural and applied sciences sectors.
- the average earnings are among the highest for professional occupations and for occupations in the natural and applied sciences sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since employment opportunities and earnings are both well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Firms in this area face intense international competition, requiring their engineers to be at the leading edge of their field, with a need to continually update their skills.
- There are likely to be significant new opportunities for these engineers in setting up computerized production systems. This may increasingly require electrical and electronics engineers to work with mechanical engineers.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the electrical and electronics products and professional services industries.

Earnings



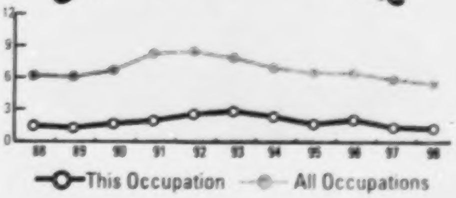
Overall Average for All Ages (15+)

This Occupation	All Occupations
52 700	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

Unemployment Rate



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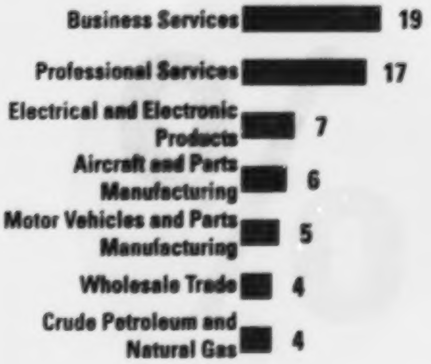
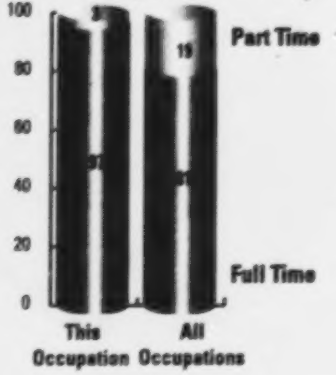
Other Engineers

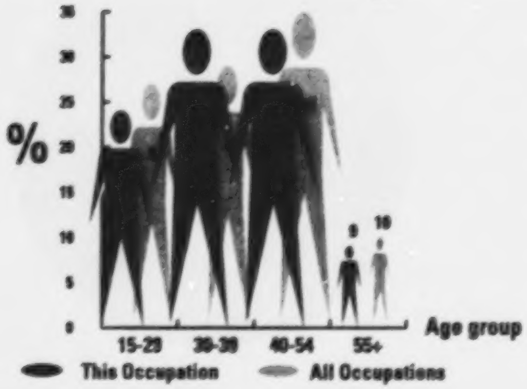
Where They Work



Type of Employment %



Distribution by Age



At Work

These engineers are employed throughout the public and private sectors.

- Industrial and manufacturing engineers increase the efficiency of business processes and of human resources and equipment.
- Metallurgical and materials engineers design and develop processes and equipment to concentrate, extract, refine and process metals and other materials.
- Mining engineers plan and design the development of mines; mining facilities, equipment and systems; and mining operations.
- Geological engineers analyze geological and geotechnical conditions for civil engineering, mining and other projects.
- Petroleum engineers research, develop and supervise projects associated with the drilling, completion, testing and reworking of oil and gas wells.
- Aerospace engineers research, design and develop aircraft, spacecraft, missiles, satellites, aerospace systems and their components.
- Computer engineers design, develop and test computer hardware and software.
- Agricultural engineers design agricultural machinery and systems.Engineering physicists and engineering scientists conduct research and develop new processes and equipment to expand basic knowledge in engineering.
- Biomedical engineers design and develop medical instruments and equipment.
- Naval architectural engineers design and develop ships and floating structures.

Education, Training & Experience

- These engineers must have a university degree in their field of engineering. Most recent entrants have an undergraduate university degree.
- They must register as a Professional Engineer (P.Eng./ing.) with a provincial or territorial association of professional engineers.

Check out the 'big picture' in "World of Work: Overviews and Trends"

In These Occupations...

- 62,000 people were employed in 1998, an increase of 36.9% from 1988. After employment gains of 28.1% from 1988 to 1993, employment growth slowed to 6.9% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 37% are computer engineers and 21% are industrial and manufacturing engineers.
- 3% work part-time, well below the average of 19% for all occupations.
- 14% are self-employed, compared to an average of 17% for all occupations.
- 9% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 3% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are comparable to those for other professional occupations and for other occupations in the natural and applied sciences sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities are average, although earnings are above the average level for all occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- The rapid pace of technological change in engineering means that these professionals must be committed to continually upgrading their skills.
- Labour market conditions are likely to vary significantly among the various occupations in this group. Conditions in computer engineering and biomedical engineering are likely to remain very favourable.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the business services, electrical and electronic products and professional services industries.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	50 452	67 033	77 371
Average	41 615	54 562	62 010
Lowest 20%	32 485	40 662	43 977

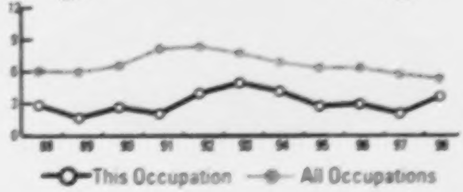
Overall Average for All Ages (15+)

This Occupation	All Occupations
55 692	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate



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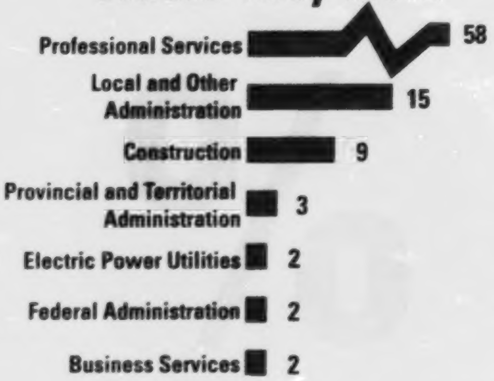
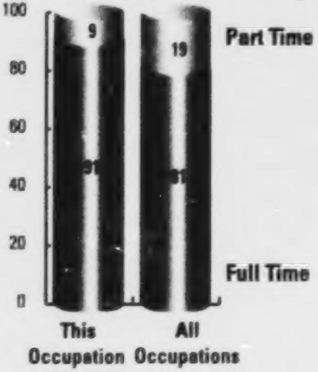
Architects, Urban Planners and Land Surveyors

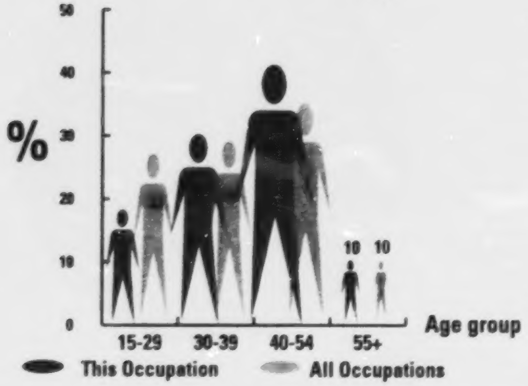
Where They Work



Type of Employment %



Distribution by Age



At Work

People in this group work in government; in architectural, engineering and landscape consulting and contracting firms; in private corporations; in private sector surveying firms; and for land developers. They may also be self-employed.

- Architects plan and develop designs for the construction and renovation of residential, commercial, institutional and industrial buildings.
- Landscape architects develop landscape designs and oversee the landscaping of commercial projects, office complexes, parks, golf courses and residences.
- Urban and land use planners prepare and recommend land development plans for urban and rural areas and remote regions.
- Land surveyors direct and conduct legal surveys to establish property boundaries, and prepare and maintain associated documents.

Education, Training & Experience

- People in these occupations usually require a university degree, although some have a community college diploma. Most recent entrants have an undergraduate university degree or a community college diploma.
- Architects must have a professional architecture degree and three years' experience with a registered architect, or studies from the Royal Architectural Institute of Canada syllabus program and eight years' experience with a registered architect. They must register with their provincial association and pass the Architect Regulation examination.
- Landscape architects require some design experience and registration or certification with their provincial association.
- Urban and land use planners usually belong to the Canadian Institute of Planners and, in some provinces, must belong to their provincial association. In Quebec, they must be members of the Ordre professionnel des urbanistes du Québec.
- Land surveyors must complete a degree in surveying engineering or survey science or pass the official land surveyor examinations. They must also article for one to three years and pass professional land survey examinations for a federal or provincial licence. To practise, they must be members of the provincial professional land surveyor association.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: U850, U330, C351, U830, C334, M850, C640, C641, M830

NOC 215

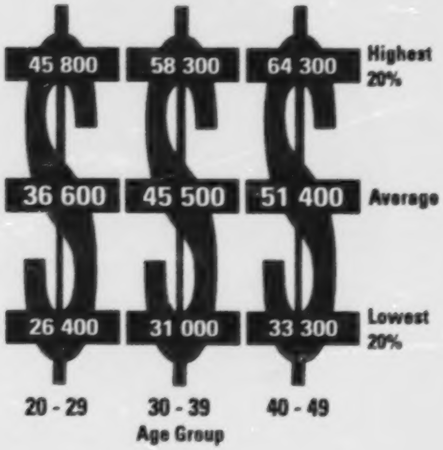
In These Occupations...

- 30,000 people were employed in 1998, an increase of 7.6% from 1988. Most of the growth occurred from 1993 to 1998, when employment increased 6.1%. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 38% are architects; 30% are land surveyors; and 26% are urban and land use planners.
- 9% work part-time, compared to an average of 19% for all occupations. The proportion of part-time workers in these occupations has increased significantly over the last ten years.
- 33% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 15% are women, well below the average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 4% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are comparable to those for other professional occupations and for other occupations in the natural and applied sciences sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities and earnings are both above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Architects are likely to make increasing use of computerized design and engineering systems, which will require them to develop skills in these areas. Urban planners and surveyors are likely to work increasingly with computerized mapping systems. A new positioning technology, the Global Positioning System (GPS), is transforming the work of surveyors.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the professional services industry.

Earnings



Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	45 800	58 300	64 300
Average	36 600	45 500	51 400
Lowest 20%	26 400	31 000	33 300

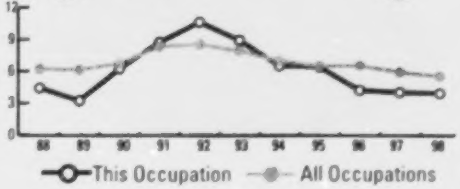
Overall Average for All Ages (15+)

This Occupation	All Occupations
47 700	37 400

Work Prospects

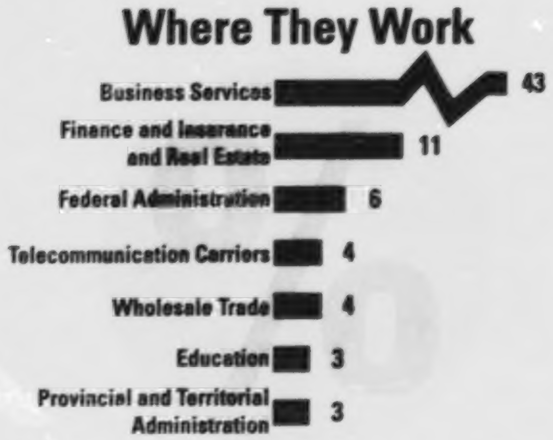
CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

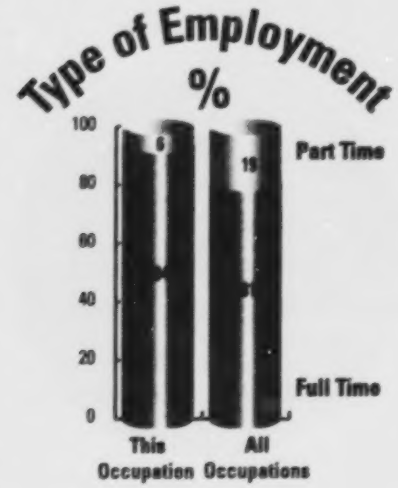
Unemployment Rate

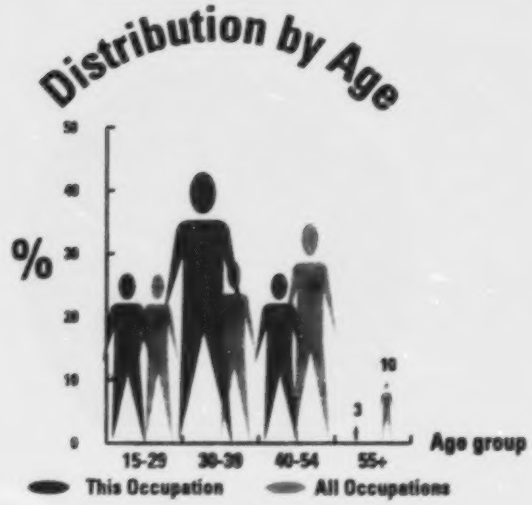


Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Mathematicians, Systems Analysts and Computer Programmers







At Work

People in this group work in government; universities; bank, trust and insurance companies; science, engineering and computer consulting firms; and throughout the private sector.

- Mathematicians and statisticians develop and apply mathematical or statistical techniques to solve problems in fields such as physical and biological science, engineering, social science, business and economics.
- Actuaries apply mathematics, probability, statistics and risk theory to calculate future risks for insurance and annuity premiums and benefits.
- Computer systems analysts design computer systems to meet clients' information processing or computation needs. They also plan and implement computer security systems.
- Computer programmers write computer programs and software packages and maintain existing computer programs.

Education, Training & Experience

- People in this group usually require a university degree in their field of work or a college program in computer science. Most recent entrants have an undergraduate university degree or a community college diploma.
- Mathematicians and statisticians must have a graduate degree in mathematics or statistics.
- Actuaries usually need a university degree or college diploma in mathematics, statistics or operations research, three years' actuarial experience and accreditation with the Canadian Institute of Actuaries.
- Computer analysts and programmers usually require a university degree or college program in computer science.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 2162, 2163
Part 2 Field of Study Cross-index: C720, U720, U740, U380, U120, T720, C382, U370, M720

NOC 216

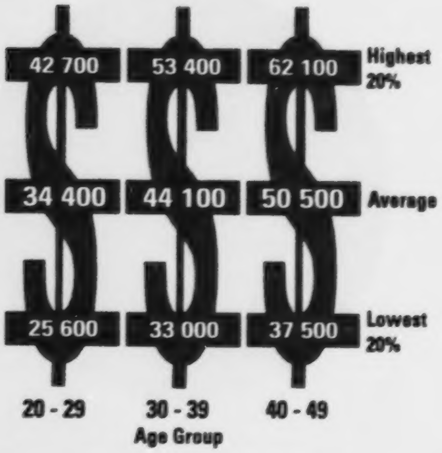
In These Occupations...

- 238,000 people were employed in 1998, an increase of 96.0% from 1988. This reflects an increase of 24.3% from 1988 to 1993 and 57.7% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 55% are computer systems analysts and 42% are computer programmers.
- 6% work part-time, well below the average of 19% for all occupations.
- 18% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 27% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 2.7% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are comparable to those for other professional occupations and for other occupations in the natural and applied sciences sectors. Salaries for actuaries, however, are considerably higher than the overall average for this group.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities and earnings are both above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Labour market conditions are strongest for computer analysts and programmers. Consolidation in the insurance industry is likely to lead to weaker conditions for actuaries, although they may move into new fields such as compensation consulting, health care and financial planning.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the business services industry.

Earnings



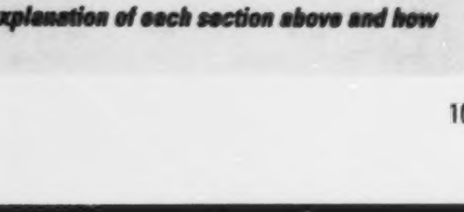
Overall Average for All Ages (15+)

44 000	37 400
This Occupation	**All Occupations**

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

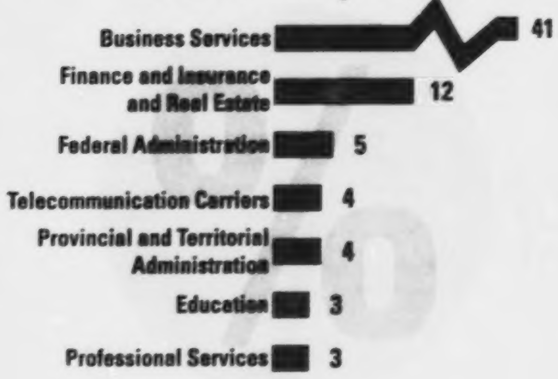
Unemployment Rate



Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

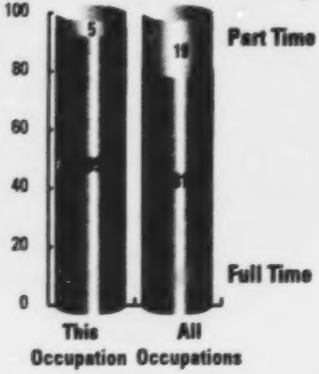
Computer Systems Analysts

Where They Work

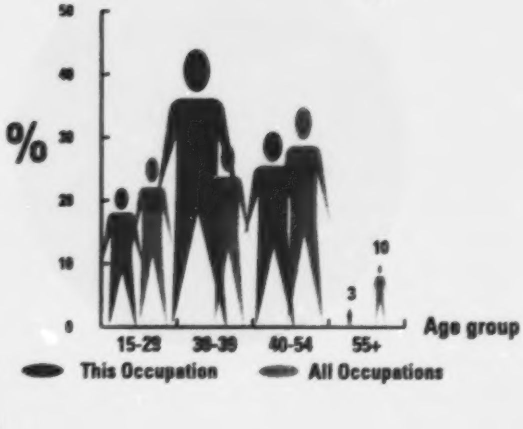


Type of Employment

%



Distribution by Age



At Work

These analysts work in computer consulting firms and computer systems units throughout the private and public sectors. Their duties may require them to:

- analyze and find computer solutions to clients' information processing, database or computation needs;
- write requirement specifications for computer programs, identifying steps in the program and required algorithms;
- test and implement computer programs and provide user training;plan and implement computer security systems for database access control; and
- analyze databases, develop database directories and generate and maintain databases; and supervise computer programmers or other systems analysts or serve as project leaders.

This occupation also includes business systems analysts, computer consultants, computer graphics specialists and electronic data processing analysts.

Education, Training & Experience

- These analysts must usually complete either a bachelor's degree, typically in computer science, mathematics, commerce or business administration, or a college program in computer science. Most recent entrants have an undergraduate university degree or a community college diploma.
- They must usually have experience as computer programmers.
- Those who wish to specialize in commercial or engineering and scientific applications must take specific college or university studies or obtain experience in those applications.
- With experience, they may progress to supervisory or senior positions or become information systems and data processing managers.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 216
Part 2 Field of Study Cross-index: C720, U720, U120, U740, U280

NOC 2162

In These Occupations...

- 131,000 people were employed in 1998, an increase of 112.4% from 1988. After employment gains of 33.2% from 1988 to 1993, employment grew 59.5% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 5% work part-time, well below the average of 19% for all occupations.
- 15% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in this occupation has increased significantly over the past ten years.
- 29% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 2.1% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations in the natural and applied sciences sectors.
- the average earnings are comparable to those for other professional occupations and for other occupations in the natural and applied sciences sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since employment opportunities and earnings are both above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Systems analysts will need to keep up with rapid changes in programming languages and techniques. They also require good interpersonal and communication skills to be able to understand the nature of client requirements and to convey information about technical occupations to clients who typically have little knowledge of information systems.
- Job opportunities related to the year 2000 problem will disappear, so that analysts who have been working in this area will need to move into other fields. This may require updating their skills.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the business services industry.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	43 400	54 900	63 300
Average	35 500	45 300	51 700
Lowest 20%	26 700	33 900	38 100

Age Group

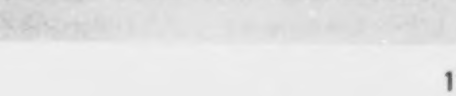
Overall Average for All Ages (15+)

This Occupation	All Occupations
45 600	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

Unemployment Rate



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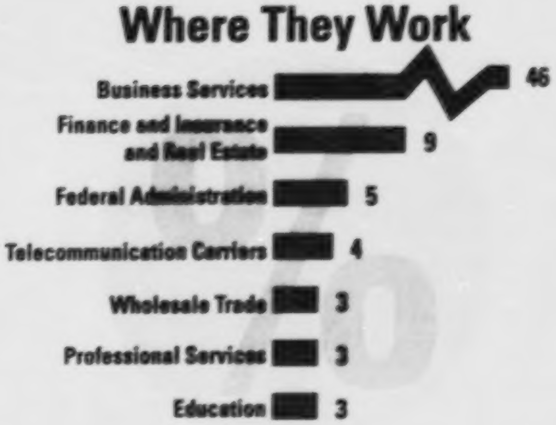
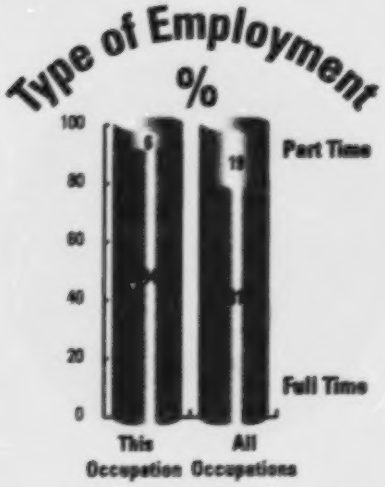
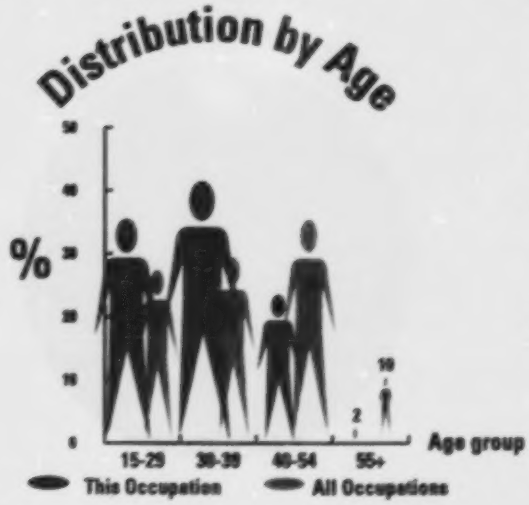
Computer Programmers



Where They Work



Type of Employment



Distribution by Age

At Work

Computer programmers work in computer software and consulting firms and in programming units throughout the private and public sectors. Their duties may require them to:

- write computer programs or software packages by coding instructions into machine-readable form;
- test, debug, document and implement computer programs or software packages;
- maintain existing computer programs by making minor changes as required; and
- act as a resource person, solving computer problems for users.

Education, Training & Experience

- Computer programmers must usually complete either a bachelor's degree in computer science or in another discipline with a significant programming component such as mathematics, commerce or business administration, or a college program in computer science. Most recent entrants have an undergraduate university degree or a community college diploma.
- Those who wish to specialize in commercial or engineering and scientific applications must take specific college or university studies or obtain experience in those applications.
- With experience, they may progress to senior positions, such as programmer analyst, or become computer systems analysts.

In These Occupations...

- 99,000 people were employed in 1998, an increase of 86.0% from 1988. Most of the growth occurred from 1993 to 1998 when employment increased 64.3%. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 6% work part-time, well below the average of 19% for all occupations.
- 23% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in this occupation has increased significantly over the last ten years.
- 24% are women, well below the average of 45% for all occupations.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 216
Part 2 Field of Study Cross-index: C720, U720, U120, U740, U360

NOC 2163

- the unemployment rate averaged 3.6% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the lowest for professional occupations but are comparable to those for other occupations in the natural and applied sciences sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Success for programmers will require keeping up with rapidly changing programming languages and techniques.
- Job opportunities related to the year 2000 problem will disappear, so that programmers who have been working in this area will need to move into other fields. This may require updating their skills.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the business services industry.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	40 200	50 800	58 100
Average	32 800	41 500	46 600
Lowest 20%	24 600	30 400	34 100

Age Group

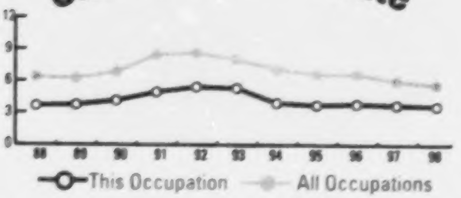
Overall Average for All Ages (15+)

This Occupation	All Occupations
40 500	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate



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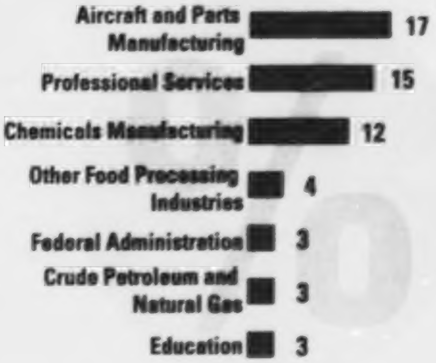
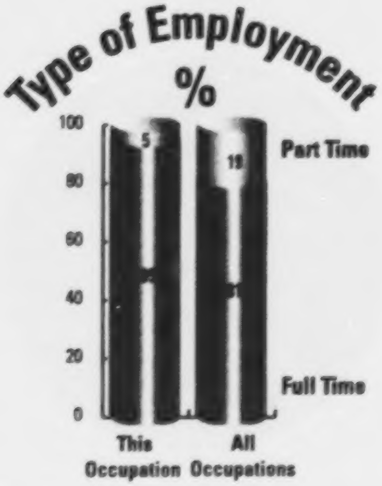
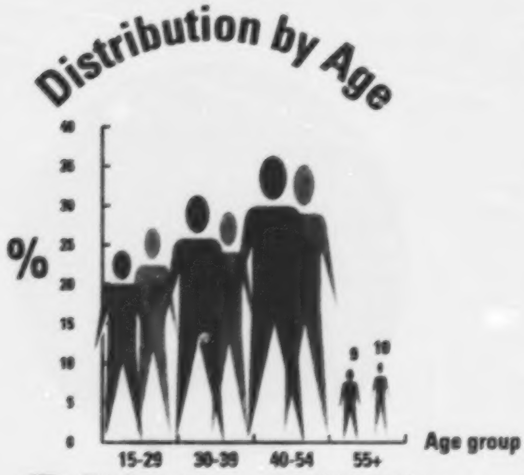
Technical Occupations in Physical Sciences

Where They Work







At Work

People in these occupations work in government; research and development and quality control laboratories; engineering and geological consulting firms; petroleum and mining companies; chemical, petrochemical, pharmaceutical and other manufacturing and processing industries; utilities; and health and educational institutions.

- Chemical technologists and technicians conduct laboratory tests, sampling programs, studies and other activities in chemical engineering, chemical and biochemical research, industrial chemistry, chemical quality control and environmental monitoring.
- Geological and mineral technologists and technicians conduct, or participate in, geological, geophysical, geochemical, hydrographic and oceanographic surveys, prospecting field trips, exploratory well drilling, keeping logs of wells and underground mine survey programs.

Education, Training & Experience

- People in these occupations must have a college or technical institute diploma. They often need certification by a professional organization in their field. Many recent entrants have a community college diploma.
- Chemical technologists and technicians usually have a college or technical school diploma in chemical, biochemical or chemical engineering technology, or in a closely related discipline.
- Geological and mineral technologists and technicians usually need a college or technical institute diploma in geological, petroleum, mining, mining engineering, hydrogeology or ground water, mineralogy, metallurgical or welding technologies.
- Geophysics technologists may require a college or technical institute diploma in geophysics, petroleum or electronics technology.

Check out the 'big picture' in "World of Work: Overviews and Trends"

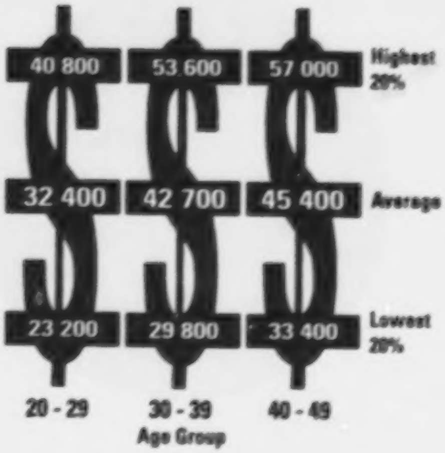
In These Occupations...

- 25,000 people were employed in 1998, an increase of 25.3% from 1988. After employment gains of 21.0% from 1988 to 1993, employment growth slowed to 3.6% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 70% are applied chemical technologists and technicians and 27% are geological and mineral technologists and technicians.
- 5% work part-time, well below the average of 19% for all occupations.
- 9% are self-employed, compared to the average of 17% for all occupations.
- 35% are women, compared to an average of 45% for all occupations.The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 3.9% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations and are comparable to those for other occupations in the natural and applied sciences sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities are average, although earnings are above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- People who work in these occupations must foresee periods of retraining and professional development as technology changes. Increasingly, they will be required to obtain certification in their field.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the professional services industry and in education.

Earnings



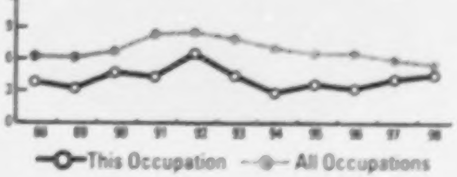
Overall Average for All Ages (15+)

43 100	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
LIMITED	LIMITED

Unemployment Rate



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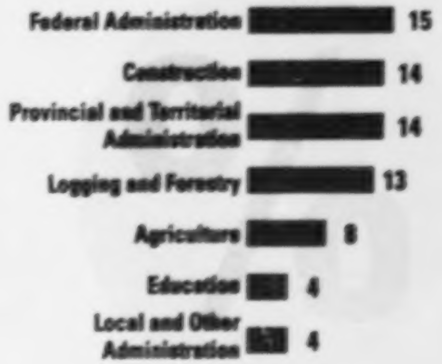
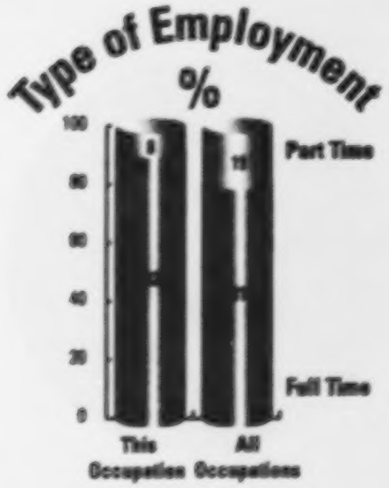
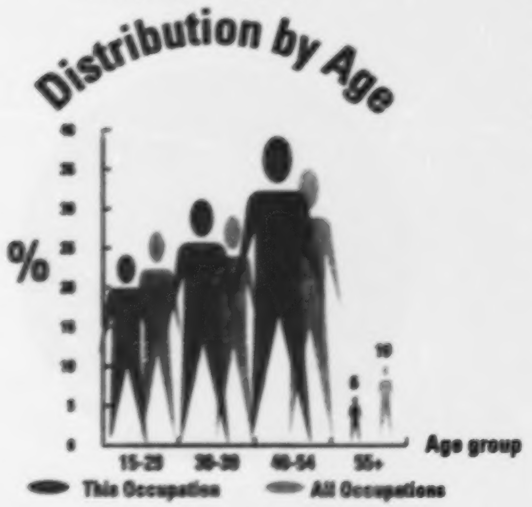
Technical Occupations in Life Sciences

Where They Work







At Work

People in these occupations work in government, in the forestry and agriculture industries, and throughout the private sector.

- Biological technologists and technicians do biological tests, laboratory analyses, field tests and surveys in natural resources, agriculture and health sciences.
- Agricultural, fish products, meat and other food products inspectors check products to ensure that processing conforms to standards of production, storage and transportation.
- Forestry technologists and technicians work in forestry research, management, harvesting, resources, conservation and protection.
- Landscape designers and landscape architectural technologists and technicians assist landscape architects by surveying and assessing sites, and preparing drawings and sketches of landscape environments.

This group also includes conservation and fishing officers, horticulturists and other specialists in landscaping.

Education, Training & Experience

- People in these occupations must have a college or technical institute diploma and usually require specialized training. They often need certification by a professional organization in their field. Many recent entrants have a community college diploma.
- Biological technologists and technicians usually need a college diploma or university degree related to agriculture, biology, microbiology, wildlife or resource management.
- Agricultural and fish products inspectors require a university degree or college diploma in agriculture, biology or a related program, or several years' experience in agricultural production or fish processing.
- Forestry technologists and technicians usually have a college diploma in a forestry technology, renewable resources or forest ranger program.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: C640, U620, C641, C610, T610, C670, C560, U641, M620, U613, U612

NOC 222

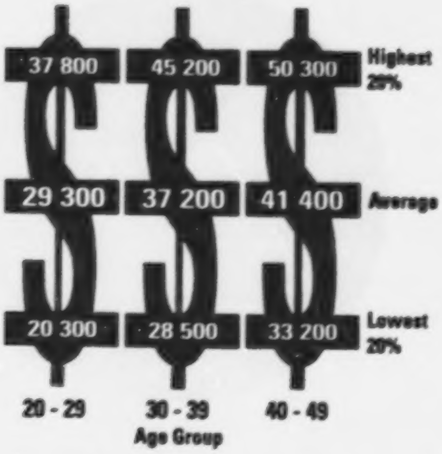
In These Occupations...

- 31,000 people were employed in 1998, an increase of 2.0% from 1988. However, after rising 2.2% over the 1988 to 1993 period, employment decreased 0.2% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 25% are forestry technologists and technicians; 25% are biological technologists and technicians; and 24% are landscape and horticultural technologists and technicians.
- 8% work part-time, well below the average of 19% for all occupations.
- 6% are self-employed, well below the average of 17% for all occupations.
- 26% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 11.4% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for technical, paraprofessional and skilled occupations and for occupations in the natural and applied sciences sectors.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations but among the lowest for occupations in the natural and applied sciences sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited", since employment opportunities are well below average, although earnings are at the average level.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- People working in these fields should plan on periods of retraining and professional development to learn new technologies. Increasingly, they will need certification from a professional organization in their field.
- Employment requirements for these occupations are expected to increase across a broad range of industries through 2004.

Earnings



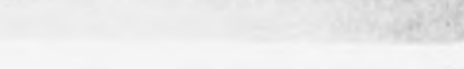
Overall Average for All Ages (15+)

40 000	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

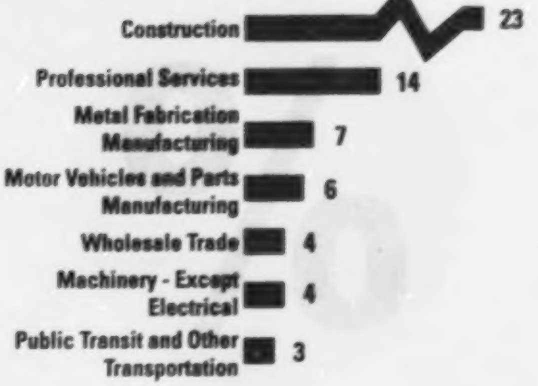
Unemployment Rate



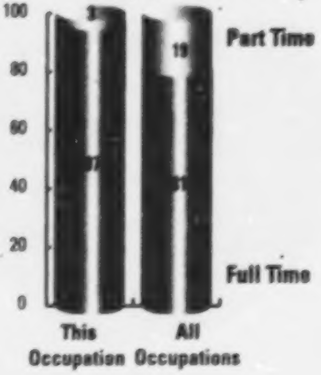
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Technical Occupations in Civil, Mechanical and Industrial Engineering

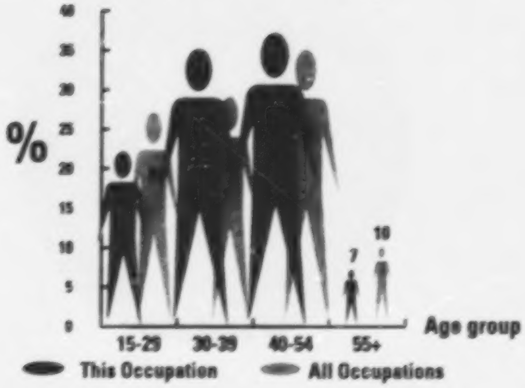
Where They Work



Type of Employment



Distribution by Age



At Work

People in these occupations work in government; in transportation, engineering consulting and construction companies; for trade contractors; in manufacturing and processing companies; and in many other industries.

- Civil engineering technologists and technicians provide support in the development of engineering designs from preliminary concepts, and prepare specifications and cost estimates for structural and municipal engineering, construction supervision, water resources, highways and other civil engineering projects.
- Mechanical engineering.technologists and technicians provide support in the preparation of engineering designs, drawings and specifications for machinery, heating and ventilating systems, and tools, moulds and other equipment.
- Industrial engineering technologists and technicians provide technical support in the development of production methods, facilities and systems, and in the planning, estimating, measuring and scheduling of work.

Education, Training & Experience

- People in these occupations usually need a college diploma in their field of work. Many recent entrants have a community college diploma.
- They usually require certification by a provincial association, which is obtained after several years' experience.
- Industrial engineering and manufacturing technologists and technicians usually take a technical school or college program in a technological area such as industrial engineering technology, pulp and paper, plastics, textiles or manufacturing.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: C350, C315, C331, C334, C380, T334, T350

NOC 223

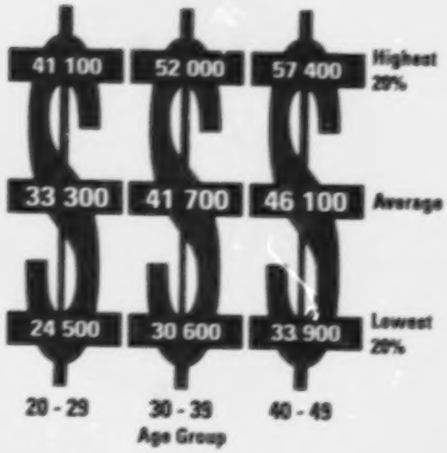
In These Occupations...

- 34,000 people were employed in 1998, an increase of 17.0% from 1988. After employment gains of 10.6% from 1988 to 1993, employment growth slowed to 5.8% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 53% are civil engineering technologists and technicians and construction estimators; 26% are mechanical engineering technologists and technicians; and 21% are industrial engineering and manufacturing technologists and technicians.
- 3% work part-time, well below the average of 19% for all occupations.
- 4% are self-employed, well below the average of 17% for all occupations.
- 17% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 4.0% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations and are comparable to those for other occupations in the natural and applied sciences sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- People in these occupations should plan on periods of retraining and professional development to keep up with rapidly changing technology in their field. Continued movement towards just-in-time production means that industrial engineering technicians will need to improve their computer skills.
- Most of the increase in employment requirements through 2004 in these occupations is expected to occur in the construction and professional services industries.

Earnings



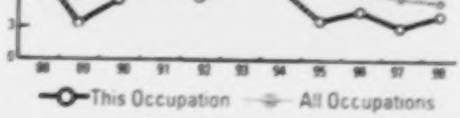
Overall Average for All Ages (15+)

This Occupation	All Occupations
42 400	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

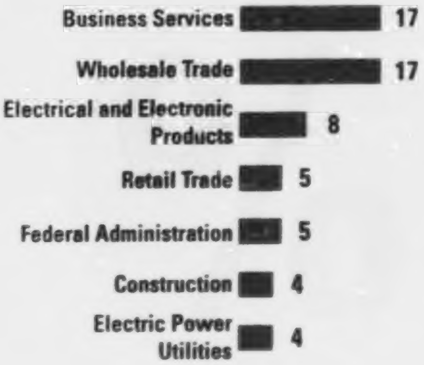
Unemployment Rate



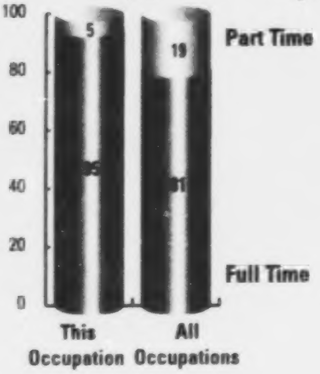
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Technical Occupations in Electronics and Electrical Engineering

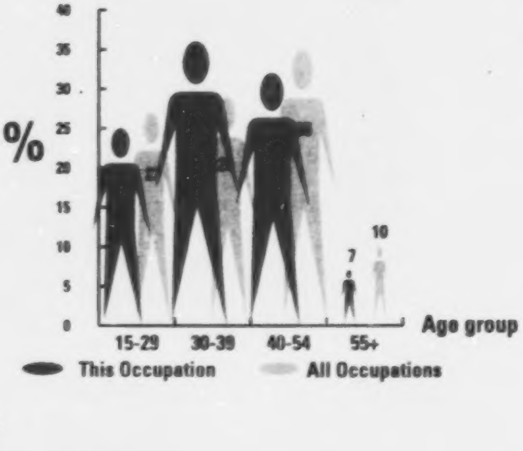
Where They Work



Type of Employment



Distribution by Age



At Work

People in these occupations work in wholesale and retail trade, business services, manufacturing, transportation, utilities, construction, government and the Canadian Forces.

- Electrical, instrumentation and electronics engineering technologists and technicians contribute expertise in the design, development, testing, production and operation of electrical and electronic equipment and systems and their application.
- Aircraft instrument, electrical and avionics mechanics and technicians repair and overhaul instrumentation and electrical and avionics systems.
- Avionics inspectors inspect and test aircraft systems.

This group also includes electronic service technicians and industrial instrument technicians.

Education, Training & Experience

- People in this group need a community college or technical school diploma and specialized training. Electrical, instrumentation and electronics engineering technologists and technicians usually complete a college program in electrical or electronics technology, computers, instrumentation, telecommunications or the equivalent. Many recent entrants have a community college diploma.
- Aircraft instrument and avionics mechanics and technicians usually complete a company-sponsored training program.
- Aircraft electrical mechanics and technicians may require a college electrical or electronics program.
- Avionics inspectors require a college or technical school program in avionics or electronics. They usually require certification by a provincial association which is obtained after several years of experience.
- Qualified electronics technicians (consumer products) and industrial instrument mechanics may also obtain interprovincial (Red Seal) trade certification which provides job mobility throughout the country.

Check out the 'big picture' in "World of Work: Overviews and Trends"

NOC 224

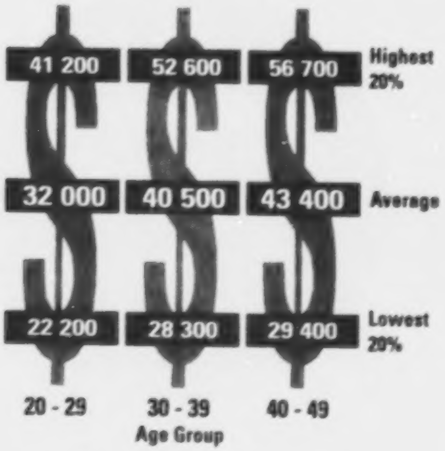
In These Occupations...

- 100,000 people were employed in 1998, an increase of 43.1% from 1988. This reflects an increase of 11.4% from 1988 to 1993 and 28.5% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 53% are electronics service technicians and 33% are electrical and electronics engineering technologists and technicians.
- 5% work part-time, well below the average of 19% for all occupations.
- 9% are self-employed, compared to an average of 17% for all occupations.
- 9% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 3% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for technical occupations.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations and are comparable to those for other occupations in the natural and applied sciences sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities are well above average and earnings are above the average level for comparable occupations.
- Over the next five years, the outlook is expected to weaken to "Fair". A large influx of recent graduates looking for work in these occupations is expected to lead to rapid growth in the number of qualified job seekers. As a result, despite significant growth in employment opportunities, the number of job seekers is expected to exceed the number of job openings.
- People working in these occupations should expect to need intermittent retraining and professional development to keep up with rapid technological change.
- Most of the increase in employment requirements through 2004 for these occupations will occur in the business services, electrical and electronic products and wholesale trade industries.

Earnings



Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	41 200	52 600	56 700
Average	32 000	40 500	43 400
Lowest 20%	22 200	28 300	29 400

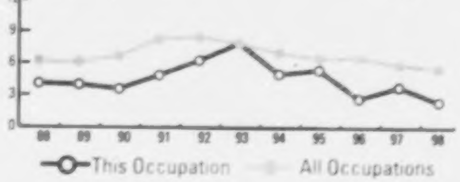
Overall Average for All Ages (15+)

This Occupation	All Occupations
40 500	37 400

Work Prospects

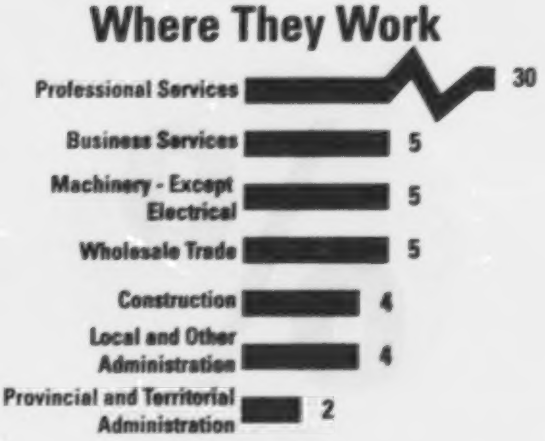
CURRENT	2004
[✓ GOOD]	GOOD
FAIR	[✓ FAIR]
LIMITED	LIMITED

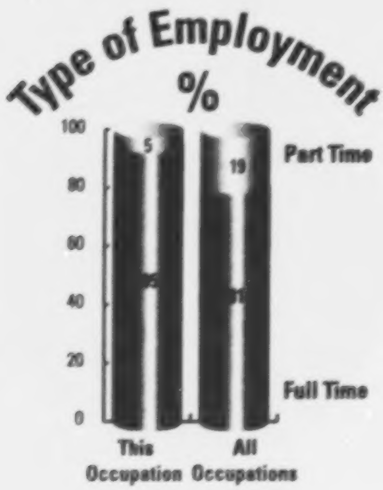
Unemployment Rate

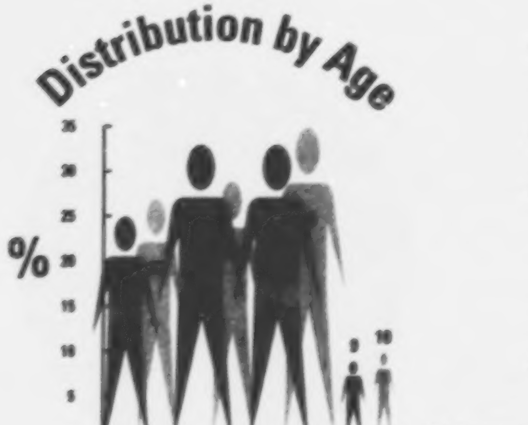


Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Technical Occupations in Architecture, Drafting, Surveying and Mapping







At Work

People in this group work in government; architectural and construction companies; utility, resource and manufacturing industries; private sector design, surveying, mapping and computer software firms; and other organizations.

- Architectural technologists and technicians research and prepare drawings and contracts for professional architects and civil design engineers.
- Industrial designers create and produce designs for consumer, industrial and business products.
- Drafting technologists and technicians use computer-aided design and drafting (CAD) and other drafting equipment to prepare designs and drawings.
- Survey technologists and technicians conduct or participate in field surveys to determine exact locations and positions of natural features and other structures. This may include use of Global Positioning System (GPS) equipment.
- Mapping and related technologists and technicians prepare maps, interpret aerial photographs and operate airborne remote and in-house sensing and interpretive equipment and the Geographic Information System (GIS).

Education, Training & Experience

- People in this group usually require a college, technical institute or university education, or specialized training. Many recent entrants have a community college diploma.
- Technologists usually need a two- to three-year college program in their area of work.
- Technicians usually need a one- to two-year college program in their area of work.
- They may require certification by a professional or technical association and other memberships.

In These Occupations...

- 49,000 people were employed in 1998, a decrease of 4.6% from 1988. Most of the decline occurred from 1988 to 1993, when employment decreased 4.1%. Employment declined 0.5% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 66% are drafting technologists and technicians.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 2253
Part 2 Field of Study Cross-index: C334, C378, C350, T335, C331, C351, T334, T350

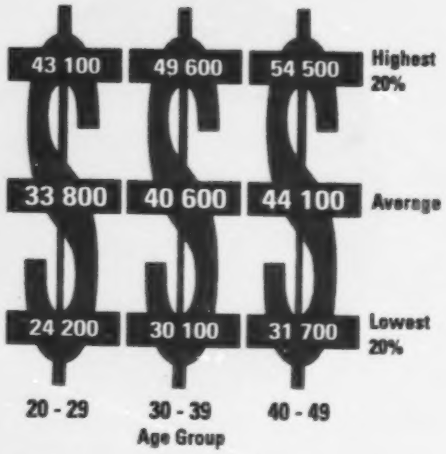
NOC 225

- 5% work part-time, well below the average of 19% for all occupations.
- 14% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 19% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 4.9% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for occupations in the natural and applied sciences sectors.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations and are comparable to those for other occupations in the natural and applied sciences sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited" as a result of long-term employment losses.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Increasing use of computerized design and engineering technology, and of computerized mapping systems and satellite positioning systems, is transforming these occupations. Workers will need to develop the appropriate skills and will need intermittent retraining and professional development to keep up with new technologies.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the professional services and non-electrical machinery industries.

Earnings



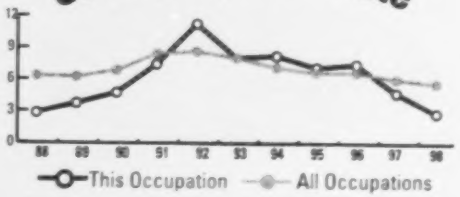
Overall Average for All Ages (15+)

40 900	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

Unemployment Rate



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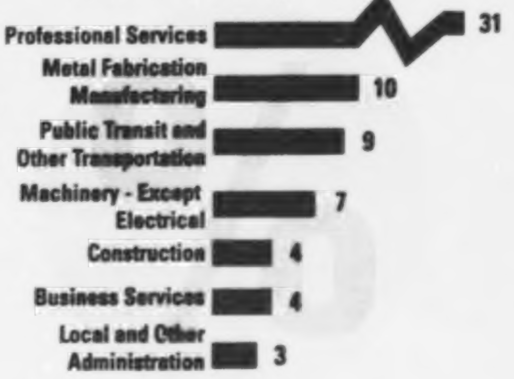
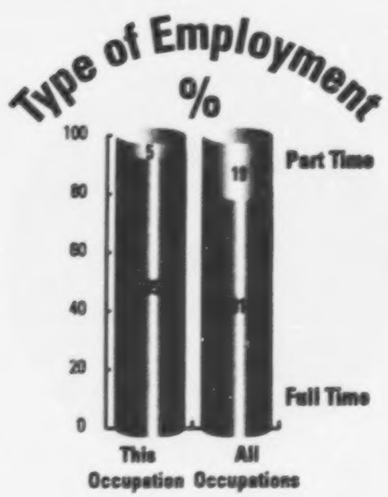
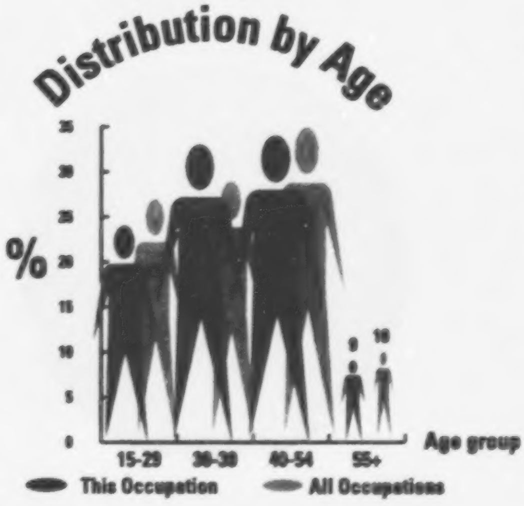
Drafting Technologists and Technicians

Where They Work







At Work

People in this occupation work in consulting and construction companies; in utility, resource and manufacturing companies; in all levels of government; and in a wide range of other organizations.

- Drafting technologists develop and prepare engineering designs and drawings from sketches, engineering calculations, specification sheets and other data. They may write technical reports; submit construction specifications, costs and materials estimates; and prepare contracts and tender documents.
- Drafting technicians plan and prepare engineering drawings, plans, diagrams and layouts.
- They may work independently, in teams with engineers from many disciplines, or as support for engineers, architects and industrial designers.

Education, Training & Experience

- People in this occupation must have a high school diploma. Most recent entrants have a trade/vocational certificate or a community college diploma.
- Drafting and design technologists usually complete a two- to three-year college or technical school program in engineering design and drafting technology or in a related field.
- Drafting technicians usually complete a one- to two-year college program in drafting or four years' apprenticeship training in drafting, or have a combination of four to five years' related work experience and college or industry courses in drafting.
- If they wish, draftspersons may obtain certificates of qualification from provincial apprenticeship authorities.
- Some employers require drafting technologists and technicians to obtain certification in engineering design and drafting technology, or in a related field, through provincial associations. This certification requires a period of supervised work experience, usually two years.
- With additional education or experience, they may specialize in civil, mechanical, electrical or other engineering design technologies.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 225
Part 2 Field of Study Cross-Index: [illegible]

NOC 2253

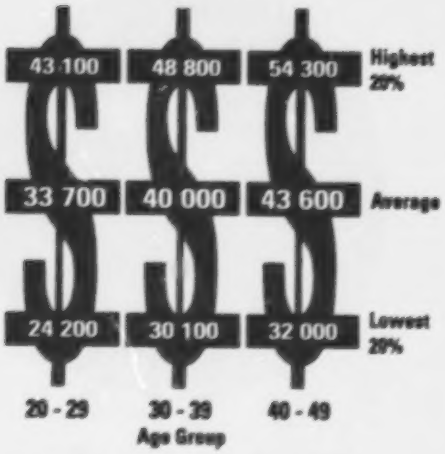
In These Occupations...

- 33,000 people were employed in 1998, a decrease of 6.3% from 1988. However, after declining 10.2% over the 1988 to 1993 period, employment increased 4.4% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 5% work part-time, well below the average of 19% for all occupations.
- 14% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in this occupation has increased significantly over the last ten years.
- 19% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 4.3% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations but are comparable to those for other occupations in the natural and applied sciences sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair" as a result of long-term employment losses.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Rapid diffusion of computer-aided design technology will increase skill requirements in this occupation.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the professional services and non-electrical machinery industries.

Earnings



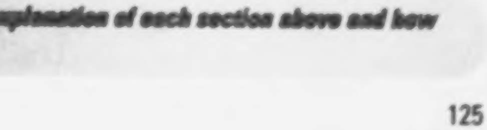
Overall Average for All Ages (15+)

40 500	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

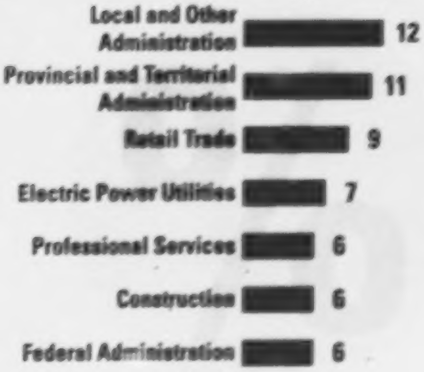
Unemployment Rate



Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

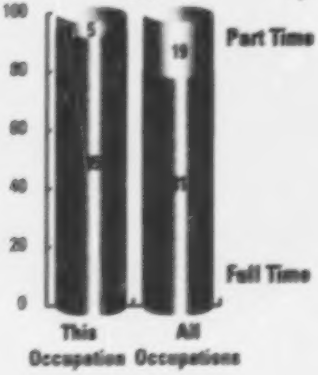
Other Technical Inspectors and Regulatory Officers

Where They Work

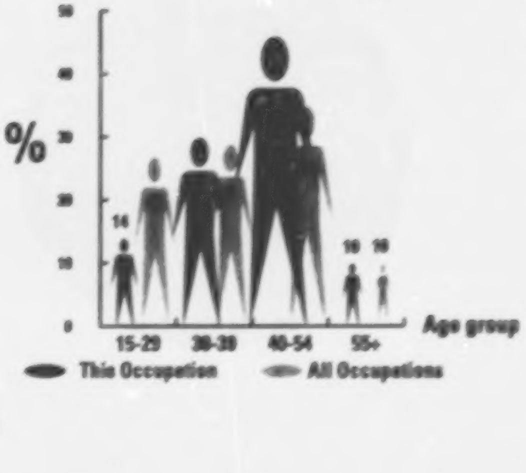


Type of Employment

%



Distribution by Age



At Work

People in this group work in government; architectural and civil engineering consulting firms; construction, manufacturing, processing, transportation and energy companies; and industrial inspection companies.

- Non-destructive testers and inspectors operate ultrasonic, liquid penetrant, magnetic particle and other testing equipment to detect defects in objects of different compositions and materials.
- Engineering inspectors and regulatory officers inspect aircraft, boats, ships, cars and trucks, weighing and measuring devices, industrial instruments, processes and equipment.
- Inspectors in public health, environmental health and occupational health and safety inspect restaurants, plants, hotels, water systems and workplaces.
- Construction inspectors inspect the construction and maintenance of buildings, bridges, highways and industrial construction.

Education, Training & Experience

- People in this group usually require certification. Most recent entrants have a high school or community college diploma.
- Non-destructive testers and inspectors require a high school diploma and completion of two years of a college or university engineering program.
- Engineering inspectors and regulatory officers need a college diploma or university degree in an appropriate field, or trade qualifications and extensive experience.
- Inspectors in public, environmental and occupational health and safety usually require a college diploma or university degree in food science, environmental studies, chemistry, health and safety or a related discipline.
- Construction inspectors must have a college diploma in construction, civil engineering or architectural technology plus several years' experience, or several years' experience as a qualified tradesperson.

Check out the 'big picture' in "World of Work: Overviews and Trends"

In These Occupations...

- 26,000 people were employed in 1998, an increase of 26.7% from 1988. However, after rising 31.5% over the 1988 to 1993 period, employment decreased 3.7% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 39% are inspectors in public and environmental health and occupational health and safety and 33% are construction inspectors.
- 5% work part-time, well below the average of 19% for all occupations.
- 7% are self-employed, well below the average of 17% for all occupations.
- 18% are women, well below the average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 5.3% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for occupations in the natural and applied sciences sectors.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations and are comparable to those for other occupations in the natural and applied sciences sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities are average, although earnings are well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Government spending decisions and an emphasis on industry self-regulation in environmental and public health areas may have an impact on these occupations.
- Employment requirements for these occupations are expected to increase across a broad range of industries through 2004.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	43 000	51 100	57 500
Average	34 600	42 500	48 300
Lowest 20%	26 700	33 000	37 200

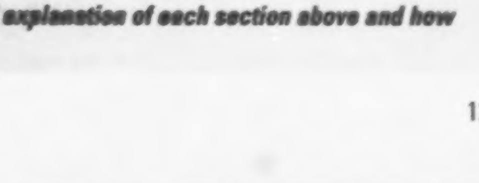
Overall Average for All Ages (15+)

This Occupation	All Occupations
43 100	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

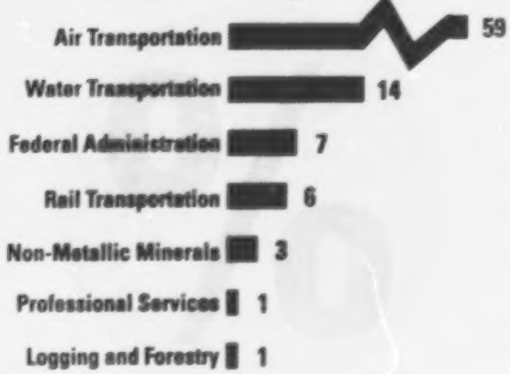
Unemployment Rate



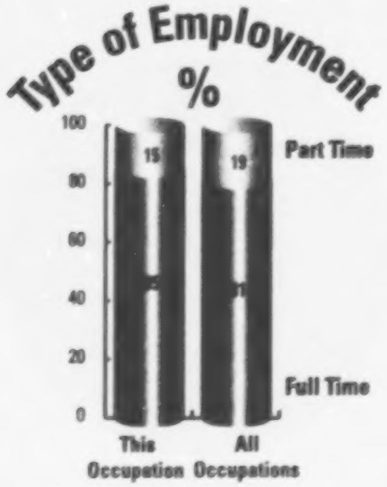
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Transportation Officers and Controllers

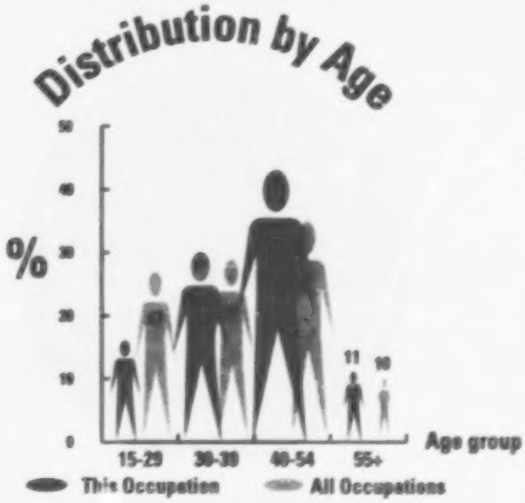
Where They Work



Type of Employment



Distribution by Age



At Work

People in this group work for port, canal and other marine authorities and in airline, air freight and air service companies; flying schools; the Canadian Forces; the Canadian Coast Guard; and rail and marine transportation companies.

- Air pilots fly aircraft, including helicopters.
- Flight engineers monitor aircraft functions and may assist in flying aircraft.
- Flying instructors teach flying techniques and ground school subjects to student pilots, and train licensed pilots for additional certification.
- Air traffic controllers direct traffic at airports and in controlled airspace.
- Flight dispatchers authorize flights over assigned routes.
- Deck officers operate ships and other vessels and supervise deck crew activities.
- Engineer officers operate and maintain vessels' main engines and equipment and supervise engine room crew activities.
- Railway traffic controllers operate centralized traffic control systems.
- Marine traffic controllers regulate marine traffic using radar, remote radio systems and other telecommunications equipment.

Education, Training & Experience

- People in this group usually must have a high school diploma and specialized training in their area of transportation. Many recent entrants have a community college diploma.
- They may require certification or special licences such as pilot's, air traffic control and radio licences.
- They may require training, special certificates and endorsements from Transport Canada.
- Transportation officers and controllers who work on ships and other vessels must usually complete a cadet program at a nautical or marine training institute or have several years' experience.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 2271
Part 2 Field of Study Cross-index: T390, C390

NOC 227

In These Occupations...

- 26,000 people were employed in 1998, an increase of 7.0% from 1988. After employment gains of 4.6% from 1988 to 1993, employment growth slowed to 2.3% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 46% are air pilots, flight engineers and flying instructors; 19% are deck officers or engineering officers in water transport; and 18% are air traffic controllers.
- 15% work part-time, compared to an average of 19% for all occupations. The proportion of part-time workers in these occupations has increased significantly over the last ten years.
- 5% are self-employed, well below the average of 17% for all occupations.
- 8% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 4.3% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations and are comparable to those for other occupations in the natural and applied sciences sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities are above average and earnings are well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- The privatization of the air navigation system will transform the working conditions of air traffic controllers. Continued fierce competition in the airline industry may affect the demand for pilots.
- Employment requirements for these occupations are expected to increase through 2004 in a range of transportation industries.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	40 100	50 800	63 400
Average	30 300	40 100	44 800
Lowest 20%	19 400	27 500	27 500

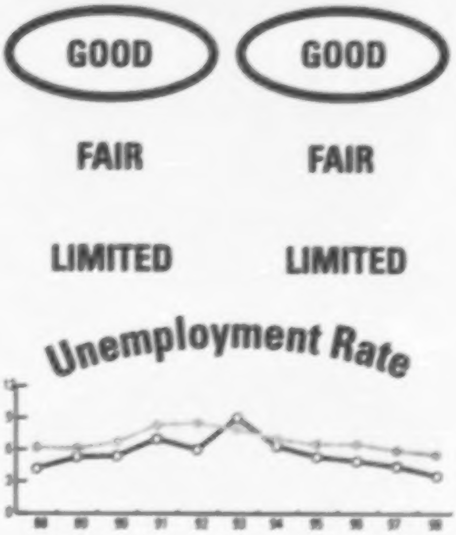
Overall Average for All Ages (15+)

This Occupation	All Occupations
46 100	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

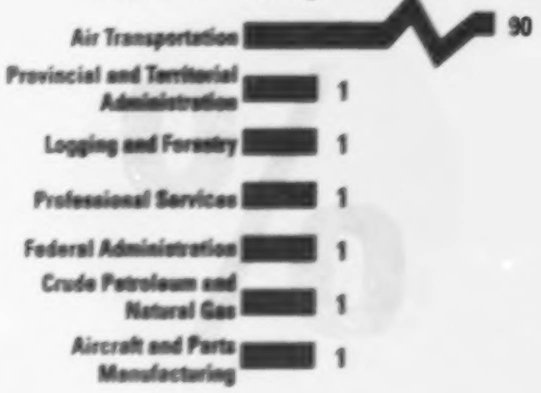
Unemployment Rate



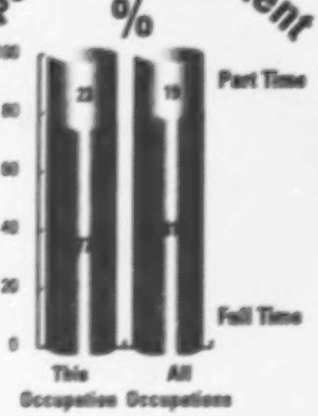
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Air Pilots, Flight Engineers and Flying Instructors

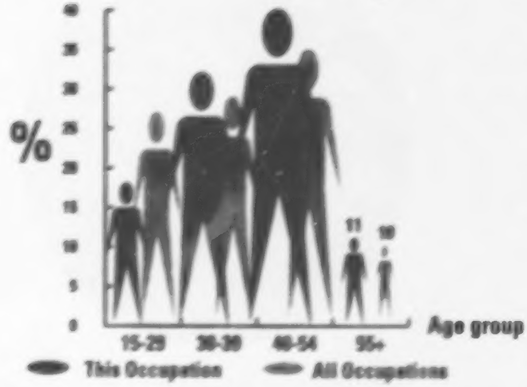
Where They Work



Type of Employment



Distribution by Age



At Work

People in this occupation work in airline and freight companies, flying schools and the Canadian Forces and for other public and private sector aircraft operators.

- Pilots fly fixed-wing aircraft and helicopters to transport passengers and freight and provide other services including search and rescue, aerial surveying and spraying and crop dusting. They may also test new aircraft.
- Flight engineers (second officers) monitor the engines, fuel consumption and functioning of aircraft systems during flight, and may assist in flying the aircraft.
- Flying instructors teach student pilots procedures and techniques of flying aircraft and ground-school subjects such as navigation, radio procedures and flying regulations.

Education, Training & Experience

- People in this occupation must complete high school, graduate from a certified flying or aviation school and have a commercial pilot's licence. Many recent entrants have a community college diploma.
- People in this occupation may require a university degree or college diploma.
- Pilots may need additional licences or endorsements to fly different types of aircraft.
- Some employers may provide structured training for pilots and flight engineers.
- Flight instructors require Transport Canada ratings and endorsements to provide instruction on different types of aircraft.

In These Occupations...

- 12,000 people were employed in 1998, an increase of 14.0% from 1988. After employment gains of 12.9% from 1988 to 1993, employment growth slowed to 1.0%-from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 23% work part-time, compared to an average of 19% for all occupations. The proportion of part-time workers in this occupation has increased significantly over the last ten years.
- 7% are self-employed, well below the average of 17% for all occupations.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 227
Part 2 Field of Study Cross-index: C390, T390

NOC 2271

- 4% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 4% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations and are comparable to those for other occupations in the natural and applied sciences sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since employment opportunities are above average and earnings are well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Continued restructuring and increased competition in the air industry may affect the demand for pilots. Most new job openings may be in lower paid jobs with regional carriers.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the air transportation industry.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	34 900	53 700	72 300
Average	25 600	40 900	51 000
Lowest 20%	16 400	26 700	30 700

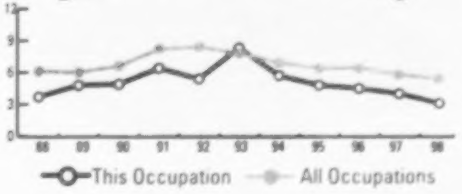
Overall Average for All Ages (15+)

This Occupation	All Occupations
50 800	37 400

Work Prospects

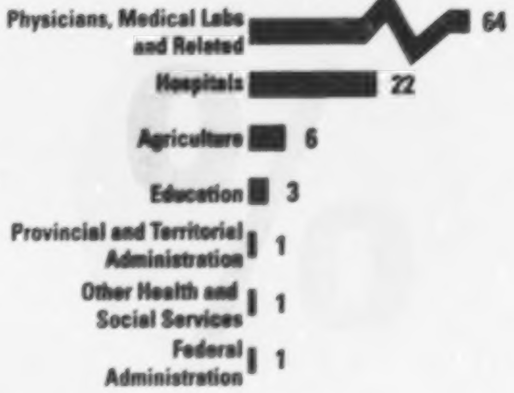
CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

Unemployment Rate

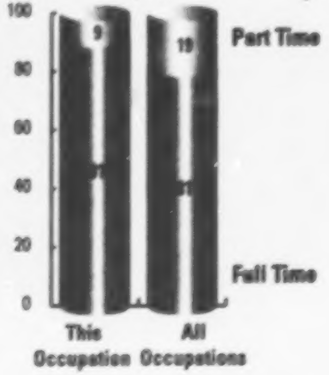


Physicians, Dentists and Veterinarians

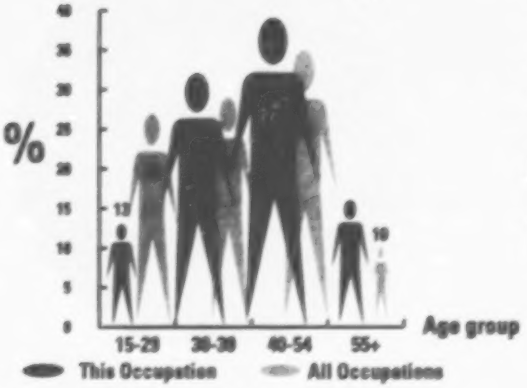
Where They Work



Type of Employment



Distribution by Age



At Work

People in this group work in government, hospitals, clinics and other health care institutions, public health facilities, universities, laboratories and animal clinics. Many work in private practice.

- Specialists in clinical medicine treat patients' diseases and physiological and psychiatric disorders and act as consultants to other physicians.
- Specialists in surgery perform and supervise surgical procedures.
- Specialists in laboratory medicine conduct laboratory tests to diagnose diseases and study the nature, cause and development of diseases.
- General practitioners and family physicians diagnose and treat patients, perform and assist at routine surgery and refer patients to specialists when necessary.
- Dentists diagnose and treat teeth and mouth disorders, design bridgework and fit dentures and other appliances. They may specialize in such areas as dental surgery and orthodontics.
- Veterinarians diagnose and treat diseases and disorders in animals, perform surgery, carry out preventive medicine, and advise on the feeding, hygiene and general care of animals. They also act to ensure food safety for consumers.

Education, Training & Experience

- People in this group need a college or university program in science and post-graduate training.
- Physicians must complete a university undergraduate degree and then complete a Doctor of Medicine degree. In addition, they require post-graduate residency training (fieldwork/practical training) and certification in either family medicine or one of the specialty categories.
- Veterinarians usually need two to four years of pre-veterinary college or university, a four-year university degree in veterinary science and national certification. In Quebec, they must be members of the Ordre des médecins vétérinaires du Québec.

In These Occupations...

- 85,000 people were employed in 1998, an increase of 29.4% from 1988. After employment gains of 17.2% from 1988 to

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 3111, 3112, 3113
Part 2 Field of Study Cross-index: U520, U530, U680, M521, M523

NOC 311

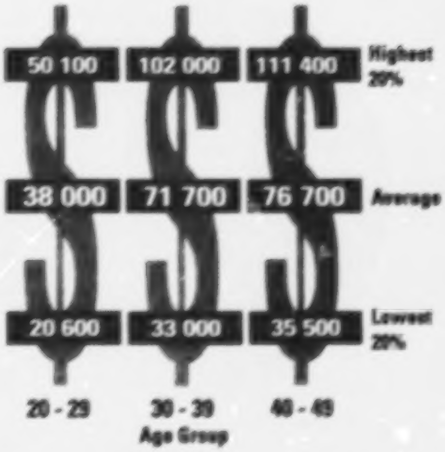
1993, employment growth slowed to 10.4% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.

- 47% are general practitioners; 27% are specialist physicians; 19% are dentists; and 7% are veterinarians.
- 9% work part-time, compared to an average of 19% for all occupations.
- 69% are self-employed, well above the average of 17% for all occupations.
- 32% are women, well below the average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 0.6% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for professional occupations and for occupations in the health sector.
- the average earnings are among the highest for professional occupations and for occupations in the health sector.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities and earnings are both well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- An aging population is likely to increase demand for medical services. However, governments' efforts to restrain health care costs may limit the growth of physicians' income.
- The aging of the population will increase demand for restorative dental work: better dental hygiene will mean more people keep their teeth longer, increasing the need for dental maintenance work.
- Changes in agriculture due to the changing requirements of world and domestic markets, environmental concerns and trends to ownership of traditional and non-traditional pets will all affect the work of veterinarians.
- Almost all of the increase in employment requirements through 2004 for these occupations is expected to occur in private health practices.

Earnings



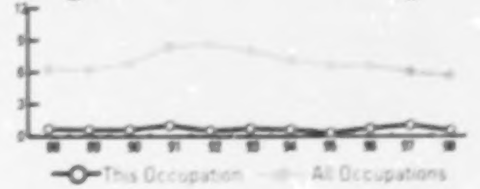
Overall Average for All Ages (15+)

76 800	37 400
This Occupation	All Occupations

Work Prospects

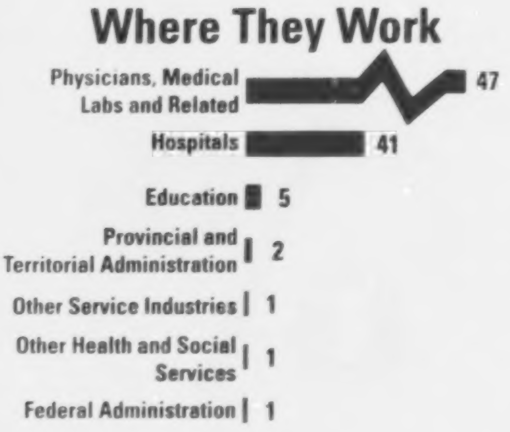
CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

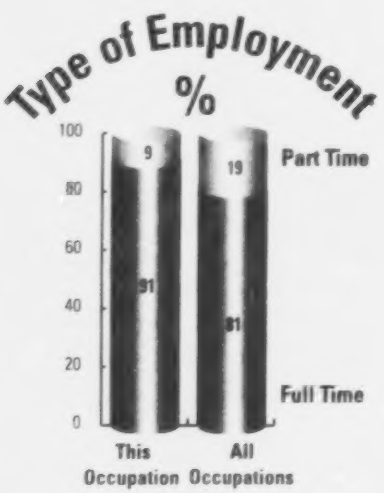
Unemployment Rate

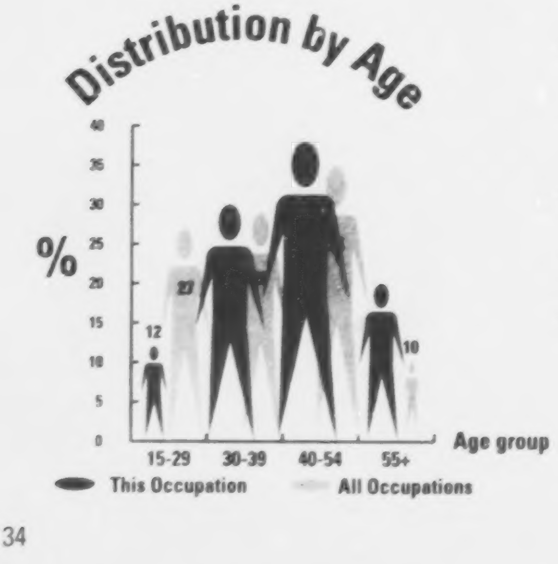


Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Specialist Physicians







At Work

Specialist physicians work in private practice or hospitals.

- Specialists in clinical medicine diagnose and treat diseases and physiological or psychiatric disorders.
- Specialists in laboratory medicine study the nature, cause and development of human diseases.
- Specialists in surgery perform and supervise surgical procedures to correct physical abnormalities and deficiencies and repair injuries.

This occupation also includes anesthetists, cardiologists, rheumatologists, medical biochemists, neuropathologists, obstetricians, ophthalmologists and thoracic surgeons.

Education, Training & Experience

- Specialist physicians must complete a university undergraduate degree or, in Quebec, a college program in health science and one year of pre-medicine university studies; graduate from an approved medical school; acquire training in their specialty; complete the qualifying examination of the Royal College of Physicians and Surgeons of Canada; and be licensed by a provincial or territorial licensing authority.
- Specialists must also have completed an additional period of supervised fieldwork/practical training (residency program). Depending on the specialty, some specialist physicians must have completed a longer residency program than others. The minimum residency program duration is four years; it must be taken at a designated teaching hospital recognized by the Royal College of Physicians and Surgeons of Canada.

In These Occupations...

- 23,000 people were employed in 1998, an increase of 28.3% from 1988. After employment gains of 16.8% from 1988 to 1993, employment growth slowed to 9.8% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 9% work part-time, well below the average of 19% for all occupations.
- 58% are self-employed, well above the average of 17% for all occupations.
- 31% are women, well below the average of 45% for all occupations. The proportion of women in this occupation has increased significantly over the last ten years.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 311
Part 2 Field of Study Cross-index: U520, M521

NOC 3111

- the unemployment rate averaged 0.9% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for professional occupations and for occupations in the health sector.
- the average earnings are among the highest for professional occupations and for occupations in the health sector.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since employment opportunities and earnings are both well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Government funding restrictions may continue to limit openings for specialists. An aging population of specialists means that retirements and deaths will eventually create new openings, a trend which may be accelerated by retirement incentives offered by government.
- Technical progress in telecommunications may mean that specialists can provide services at a distance, perhaps in collaboration with general practitioners.
- Almost all of the increase in employment requirements through 2004 for this occupation is expected to occur in physicians' practices and hospitals.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	35 600	125 400	130 100
Average	31 200	86 600	91 900
Lowest 20%	21 500	35 000	37 600

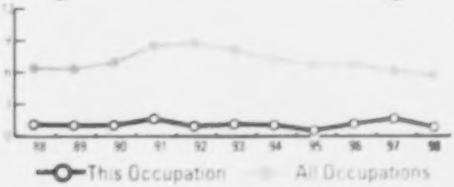
Overall Average for All Ages (15+)

This Occupation	All Occupations
92 800	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

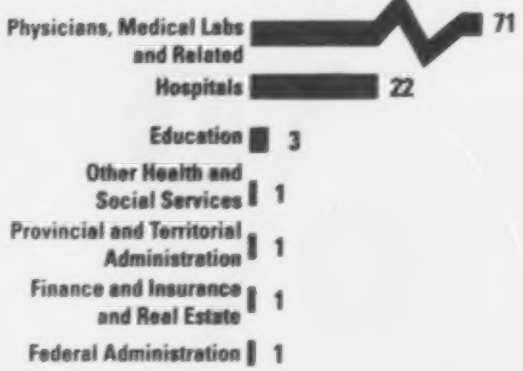
Unemployment Rate

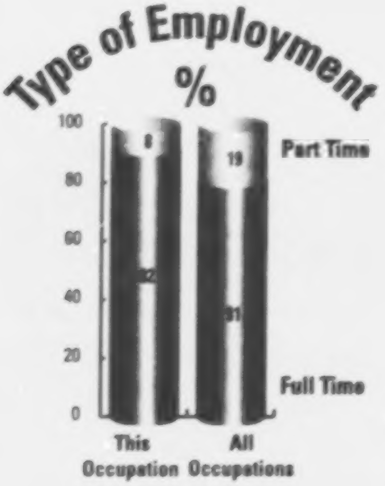


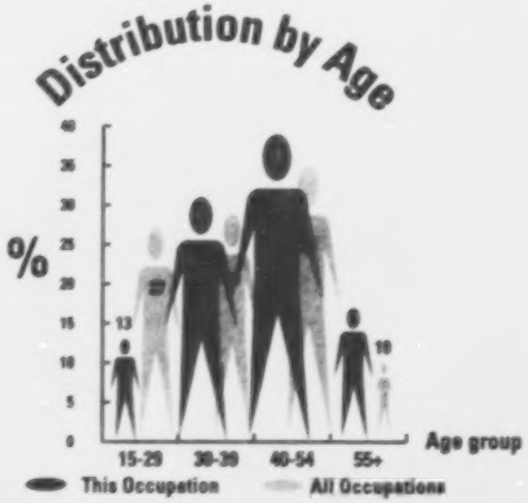
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

General Practitioners and Family Physicians

Where They Work







At Work

These physicians work in private practice, hospitals and clinics to diagnose and treat the diseases, physiological disorders and injuries of their patients. Their duties may require them to:

- evaluate their patients' health by examining patients; ordering laboratory tests, X-rays and other diagnostic procedures; and consulting with other medical practitioners;
- prescribe and administer medications and treatments and inoculate and vaccinate patients;
- advise patients on health care;
- perform and assist in routine surgery;
- deliver babies and provide prenatal and postnatal care; and
- report births, deaths and contagious diseases to government authorities.

Education, Training & Experience

- These physicians must complete a university undergraduate degree and then complete a Doctor of Medicine degree at a recognized institution. In Quebec, physicians must complete a college program in health science and one year of pre-medicine university studies and must graduate from an approved medical school.
- They must complete a two-year residency program.
- They must complete the qualifying examinations of the Medical Council of Canada and be licensed by the provincial or territorial licensing authority.
- In Quebec, they must belong to the Ordre professionnel des médecins du Québec.
- With additional training, they may become specialist physicians.

Check out the 'big picture' in "World of Work: Overviews and Trends"

In These Occupations...

- 40,000 people were employed in 1998, an increase of 33.8% from 1988. After employment gains of 25.3% from 1988 to 1993, employment growth slowed to 6.7% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 8% work part-time, well below the average of 19% for all occupations.
- 73% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed workers in this occupation has increased significantly over the last ten years.
- 33% are women, well below the average of 45% for all occupations. The proportion of women in this occupation has increased significantly over the last ten years.
- the unemployment rate averaged 0.4% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for professional occupations and for occupations in the health sector.
- the average earnings are among the highest for professional occupations and for occupations in the health sector.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since employment opportunities and earnings are both well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Restructuring of health care may limit opportunities for general practitioners, especially if the use of nurse practitioners becomes widespread. New general practitioners may be more likely to work in group practices and clinics than in individual practices.
- Almost all of the increase in employment requirements through 2004 for this occupation is expected to occur in physicians' practices and hospitals.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	63 000	103 000	105 000
Average	43 700	74 000	77 700
Lowest 20%	23 400	39 100	43 400

Age Group

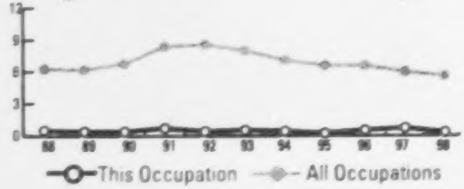
Overall Average for All Ages (15+)

This Occupation	All Occupations
78 100	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

Unemployment Rate



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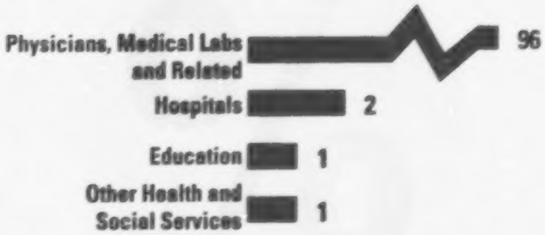
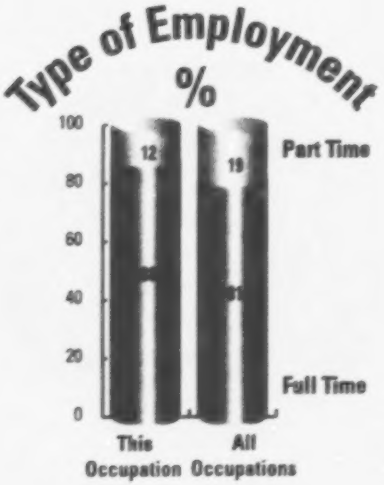
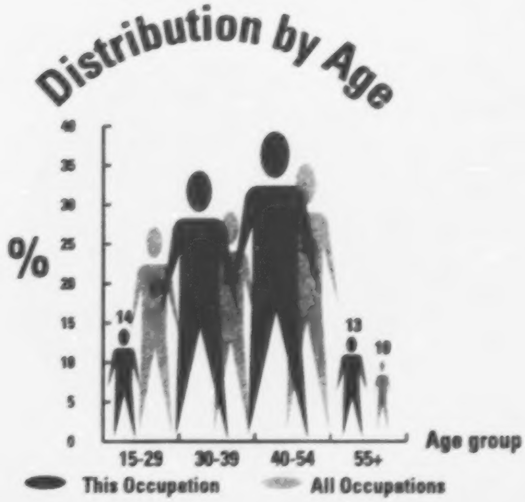
Dentists

Where They Work







At Work

Dentists may work in private practice or in hospitals, clinics, public health facilities and universities. They may specialize in areas such as oral surgery, pediatric dentistry and public health dentistry. Their duties may require them to:

- examine patients' teeth, gums and surrounding tissue to diagnose disease, injury and decay;
- restore, extract and replace diseased and decayed teeth and perform oral surgery, periodontal surgery and other treatments;
- clean teeth and instruct patients on oral hygiene; and
- design bridgework, fit dentures and provide appliances to correct abnormal positioning of the teeth and jaws.

This occupation also includes oral pathologists, oral radiologists, oral surgeons, orthodontists and prosthodontists.

Education, Training & Experience

- People in this occupation must complete one to four years' pre-dental university studies or, in Quebec, a college program in science and must hold a university degree from a recognized dental program. They must be licensed by a provincial or territorial governing body. Most recent entrants have a post-graduate university degree.
- Dentists in general practice may become specialists through advanced training. Specialists require an additional licence for their area of specialization.
- Dentists certified by the National Dental Examining Board of Canada may practise in any province and territory in Canada provided that they also meet the provincial and territorial requirements for licensing.
- In Quebec, they must belong to the Ordre des dentistes du Québec.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 311
Part 2 Field of Study Cross-index: U530, M521

NOC 3113

In These Occupations...

- 17,000 people were employed in 1998, an increase of 15.5% from 1988. Most of the growth occurred from 1993 to 1998, when employment increased 13.6%. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 12% work part-time, compared to an average of 19% for all occupations.
- 82% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed workers in this occupation has increased significantly over the last ten years.
- 24% are women, well below the average of 45% for all occupations. The proportion of women in this occupation has increased significantly over the last ten years.
- the unemployment rate averaged 0.2% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for professional occupations and for occupations in the health sector.
- the average earnings are among the highest for professional occupations and for occupations in the health sector.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since employment opportunities and earnings are both well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- The aging of the population will increase demand for restorative dental work; better dental hygiene will mean more people keep their teeth longer, increasing the need for dental maintenance work. Better dental hygiene will also mean that people have fewer cavities on average during their lifetime, decreasing work in this area. More opportunities may exist in rural areas, as some urban centers have become saturated in recent years.
- All of the increase in employment requirements through 2004 for this occupation is expected to occur in dentists' practices.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	60 900	94 600	98 700
Average	43 400	68 600	73 200
Lowest 20%	19 400	34 400	32 800

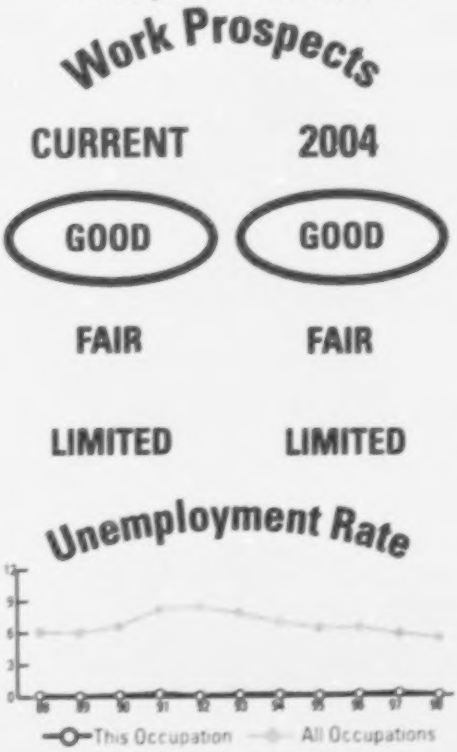
Overall Average for All Ages (15+)

This Occupation	All Occupations
70 800	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

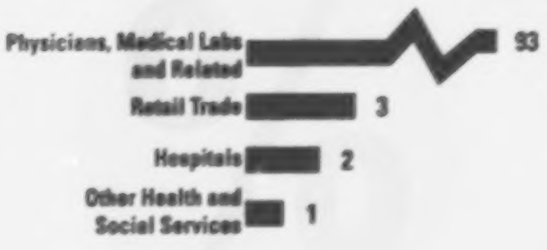
Unemployment Rate

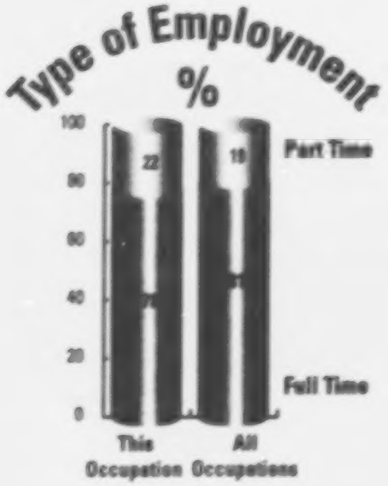


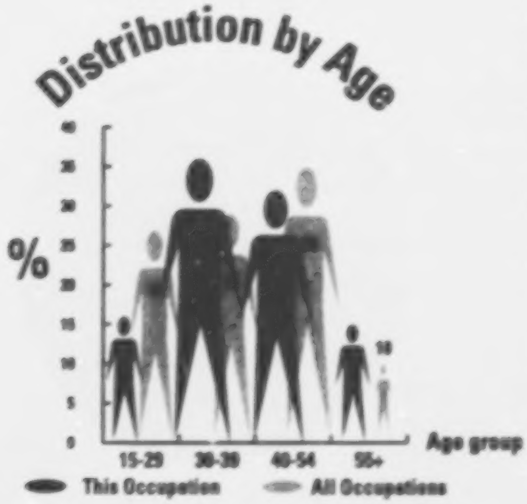
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Optometrists, Chiropractors and Other Health Diagnosing and Treating Professionals

Where They Work







At Work

People in this group work in clinics, community health centres and hospitals; in private practice; and as consultants in the private sector.

- Optometrists examine, diagnose, treat, manage and prevent diseases and disorders of the eye, and prescribe and dispense eyeglasses and contact lenses.
- Chiropractors diagnose and treat disorders of the neuromusculoskeletal system with manipulation and other techniques and provide holistic health care.
- Osteopathic physicians diagnose, treat and prescribe for patients' medical, surgical and obstetrical problems. Their training includes an emphasis on the use of the musculoskeletal system in restoring health.

This occupational group also includes orthoptists, naturopaths, podiatrists and chiropodists.

Education, Training & Experience

- People in this group must complete a college or university program and may require provincial licensing and membership in professional associations. Most recent entrants have a post-graduate university degree.
- Optometrists require a three year college program with mathematics and science courses and a four-year university degree in optometry, and must pass the Canadian Standard Assessment in optometry and provincial exams.
- Chiropractors must complete three years' university science studies, obtain a degree from an accredited chiropractic college and pass the Canadian Chiropractic Examining Board and provincial exams.
- Orthoptists require two years' education after high school in a science specialization, two years' hospital-based training and supervised practical training.
- Osteopathic physicians require a university degree, a four-year osteopathic medicine program and two to five years of post-graduate training.

In These Occupations...

- 11,000 people were employed in 1998, an increase of 17.1% from 1988. After declining 4.1% over the 1988 to 1993 period, employment increased 22.1% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: U523, M510, M523

NOC 312

- 43% are chiropractors and 41% are optometrists.
- 22% work part-time, compared to an average of 19% for all occupations. The proportion of part-time workers in these occupations has increased significantly over the last ten years.
- 81% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 38% are women, compared to an average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 1.1% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for professional occupations and for occupations in the health sector.
- the average earnings are among the highest for professional occupations and for occupations in the health sector.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities and earnings are both at well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- The rising average age of the Canadian population will result in the need for more health services in these areas, increasing labour demand in these occupations.
- People in these occupations should not be much affected by public sector decisions to curb health care costs, as most of them work in private practice in areas not covered by provincial health care plans. The rapid development of new diagnosing and treating technologies means that people in these occupations must continually update their skills.
- Almost all of the increase in employment requirements through 2004 for these occupations is expected to occur in private health practices.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	50 800	76 400	89 200
Average	35 600	58 200	62 400
Lowest 20%	17 500	25 800	25 400

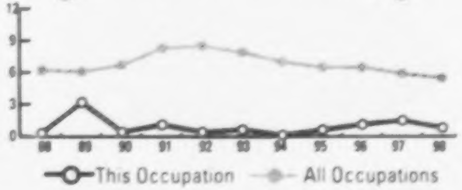
Overall Average for All Ages (15+)

This Occupation	All Occupations
60 900	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

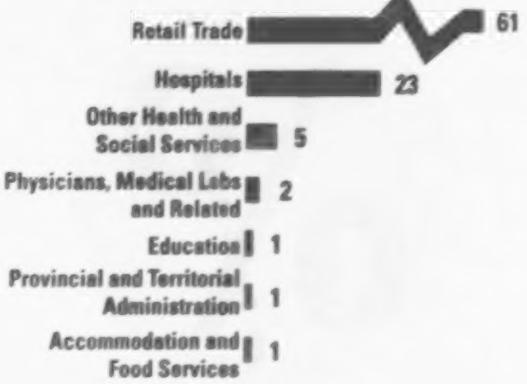
Unemployment Rate



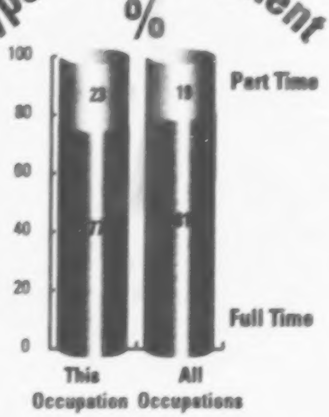
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Pharmacists, Dietitians and Nutritionists

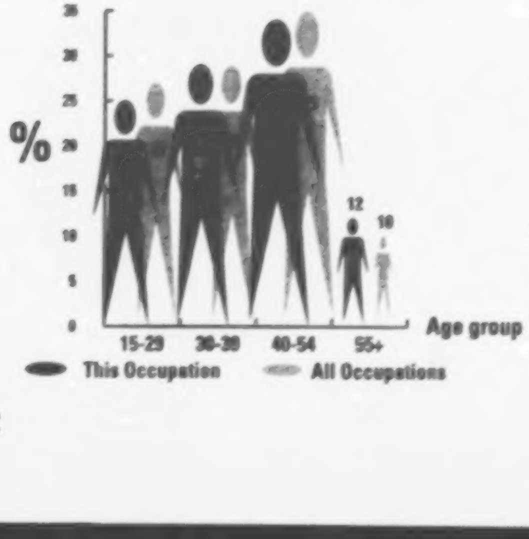
Where They Work



Type of Employment



Distribution by Age



At Work

People in this group work in government, pharmacies, hospitals and other health care institutions, pharmaceutical manufacturing establishments, industry and educational institutions.

- Community and hospital pharmacists prepare and dispense prescribed drugs and other medicines, advise on the use of drugs and medications, and maintain records of customers' medications.
- Industrial pharmacists participate in the research, development, testing and manufacture of pharmaceutical products. They also develop information material on the use and properties of particular drugs, and evaluate the labelling, packaging and advertising of drug products.
- Dietitians and nutritionists plan, conduct and supervise diet food service programs and provide nutrition counselling and consulting services. They also conduct research to improve the nutritional value, taste, appearance and preparation of food, and may specialize in different areas such as clinical, community or research dietetics, public health, food service administration or industry.

This occupational group also includes clinical pharmacists and people working in dietetics and nutrition such as clinical and community dietitians, nutrition and dietetics researchers and public health nutritionists.

Education, Training & Experience

- People in this field of work need a university degree. Most recent entrants have an undergraduate university degree.
- Pharmacists must have a bachelor's degree in pharmacy.
- Dietitians and nutritionists require a bachelor's or master's degree in dietetics, nutrition or a closely related field, one to two years' supervised training and registration with the provincial regulatory body.

In These Occupations...

- 29,000 people were employed in 1998, an increase of 20.6% from 1988. After employment gains of 17.4% from 1988 to 1993, employment growth slowed to 2.7% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 76% are pharmacists and 24% are dietitians and nutritionists.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 3131
Part 2 Field of Study Cross-index: U570, U630, M523, U620

NOC 313

- 23% work part-time, compared to an average of 19% for all occupations.
- 17% are self-employed, equal to the average for all occupations.
- 66% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 1.9% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for professional occupations.
- the average earnings are comparable to those for other professional occupations and for other occupations in the health sector.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities are well above average and earnings are above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- As the Canadian population grows older, demand for drugs and for health care of all kinds will grow, increasing labour demand in these occupations. The increase in labour demand may be offset by government initiatives to restrict health care costs, in particular, the cost of prescription drugs.
- Dietitians and nutritionists may find their best opportunities in the private sector - for example, in senior citizens' homes.
- Almost all of the increase in employment requirements through 2004 for these occupations is expected to occur in the retail trade industry and in hospitals.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	56 306	62 744	64 779
Average	45 318	50 776	52 999
Lowest 20%	35 482	37 936	35 931

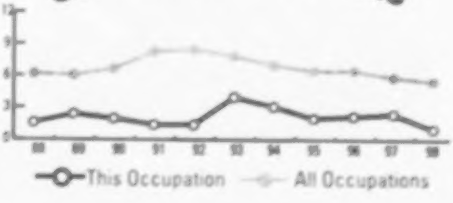
Overall Average for All Ages (15+)

This Occupation	All Occupations
50 322	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

Unemployment Rate



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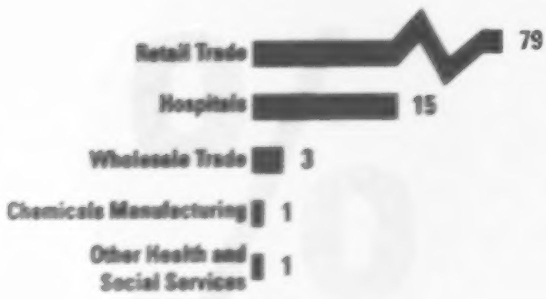
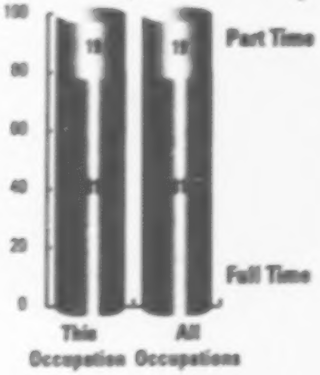
Pharmacists

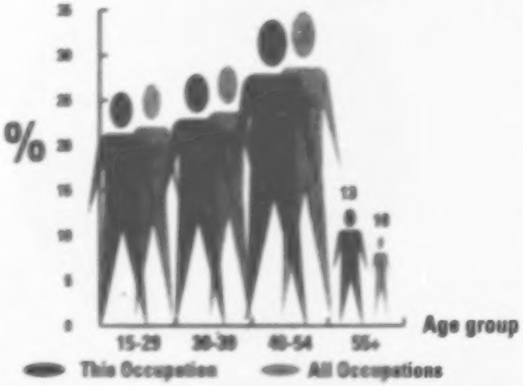
Where They Work



Type of Employment %



Distribution by Age



At Work

Pharmacists work in community and hospital pharmacies, pharmaceutical firms, government departments and agencies and pharmacies and other retail organizations.

- Community, hospital and retail pharmacists compound and dispense prescribed drug products for customers and health care professionals. They advise on the administration, use and effects of medications and maintain medication profiles of customers.
- Industrial pharmacists participate in the research, development and manufacture of drug products. They test new drug products; co-ordinate clinical investigations of new drug products; control the quality of drug products during production to make sure that they meet standards of potency, purity, uniformity, stability and safety; and evaluate the labelling, packaging and advertising of drug products.

Education, Training & Experience

- Pharmacists must have a university degree in pharmacy. Most recent entrants have an undergraduate university degree.
- Community and hospital pharmacists require supervised practical training and licences in their province or territory.
- In Quebec, they must be members of the Ordre des pharmaciens du Québec.
- Managers of pharmacies or pharmacy departments must usually have experience as pharmacists.

In These Occupations...

- 22,000 people were employed in 1998, an increase of 43.0% from 1988. After employment gains of 16.8% from 1988 to 1993, employment grew 22.5% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 19% work part-time, equal to the average for all occupations.
- 13% are self-employed, compared to an average of 17% for all occupations.
- 56% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 1.3% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for professional occupations.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 313
Part 2 Field of Study Cross-index: U570, C550, C523

NOC 3131

- the average earnings are comparable to those for other professional occupations and for other occupations in the health sector.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since employment opportunities and earnings are both well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- An aging population will increase demand for prescription drugs, favouring growth in the number of pharmacists. Restructuring in the health care sector may mean a loss of jobs in hospital pharmacies, however. Mail order pharmacies, discount chains and substitution of pharmaceutical assistants for pharmacists are other trends which may decrease the demand for pharmacists.
- The rapid development of new drugs for treatment and diagnosis means that pharmacists must update their knowledge continually. Use of computerized customer and pharmaceutical databases will require pharmacists to develop appropriate skills.
- Almost all of the increase in employment requirements through 2004 for this occupation is expected to occur in the retail trade industry and in hospitals.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	57 693	65 991	67 151
Average	47 303	53 922	55 972
Lowest 20%	39 003	41 129	40 026

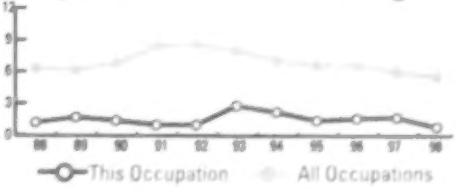
Overall Average for All Ages (15+)

This Occupation	All Occupations
53 148	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

Unemployment Rate



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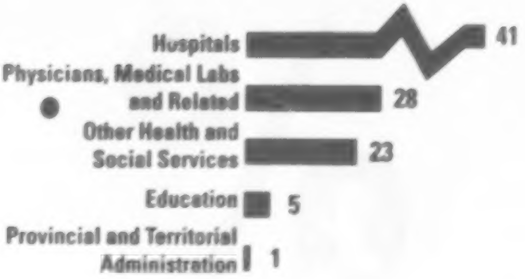
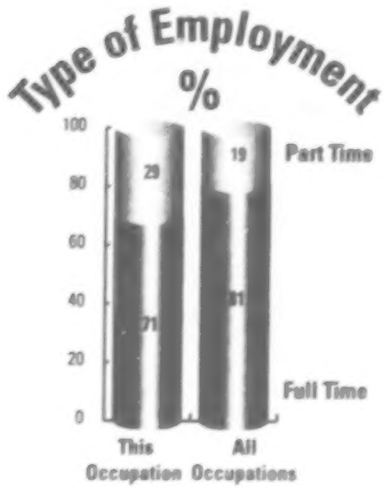
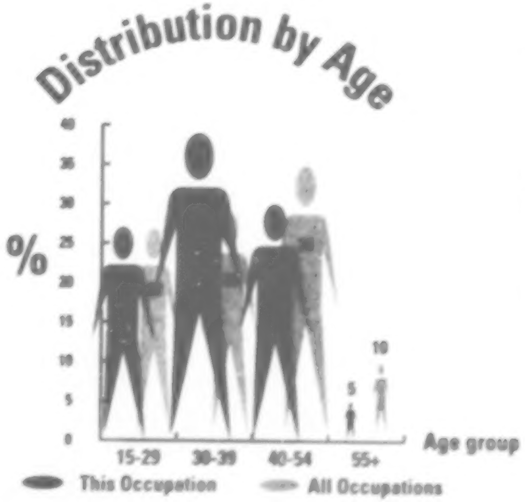
Therapy and Assessment Professionals

Where They Work







At Work

People in this group work in hospitals; educational, rehabilitation and other health care institutions; prisons; and recreational centres. They also work in private practice.

- Audiologists diagnose, evaluate and treat hearing disorders.
- Speech-language pathologists diagnose, evaluate and treat speech, language and voice disorders.
- Physiotherapists provide preventive, diagnostic and treatment services to restore or maintain function and to prevent disability or physical disfunction.
- Occupational therapists develop individualized activity programs with people affected by illness, injury, developmental disorders or problems with aging to restore or increase their ability to care for themselves and to engage in work, school and leisure.
- Art, dance, music, athletic and recreational therapists and remedial gymnasts plan and carry out specialized programs to aid in the treatment of mental and physical disabilities.

Education, Training & Experience

- People in these occupations usually require a college or university program in their area of work, a period of supervised training and credentials such as licences or memberships in professional associations. Most recent entrants have an undergraduate university degree.
- Audiologists and speech-language pathologists require a master's degree or equivalent in their area of work. They may require certification with their professional associations and licences in some provinces.
- Physiotherapists must have a university degree in physiotherapy. To practise, they must obtain provincial registration.
- Occupational therapists require a university degree from an accredited program in occupational therapy, which includes supervised field work. They must obtain provincial registration to practise.
- Art therapists need a graduate degree in art therapy.
- Dance therapists must have a bachelor's degree in psychology or dance/movement therapy or an approved graduate program in dance/movement therapy.
- Remedial gymnasts require an approved college program in remedial gymnastics.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 3142, 3143
Part 2 Field of Study Cross-index: U590, U240, M523, U523

NOC 314

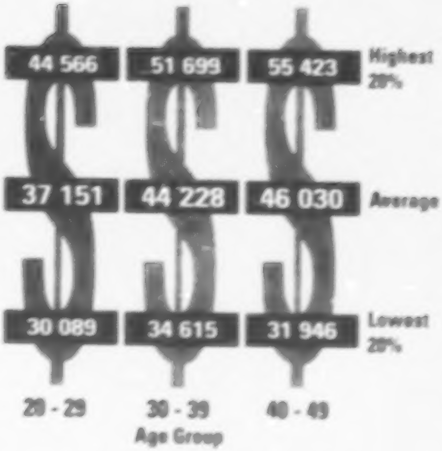
In These Occupations...

- 33,000 people were employed in 1998, an increase of 63.9% from 1988. After employment gains of 24.0% from 1988 to 1993, employment grew 32.1% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 47% are physiotherapists; 24% are occupational therapists; and 17% are audiologists and speech-language pathologists.
- 30% work part-time, well above the average of 19% for all occupations.
- 21% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 86% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 1.6% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for professional occupations.
- the average earnings are among the lowest for professional occupations but are comparable to those for other occupations in the health sector.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities are well above average and earnings are below the average level for comparable occupations.
- Over the next five years, the outlook is expected to weaken to "Limited". A large influx of recent graduates looking for work in these occupations is expected to lead to rapid growth in the number of qualified job seekers. As a result, despite significant growth in employment opportunities, the number of job seekers is expected to exceed the number of job openings.
- Labour market prospects will vary among the different occupations in this group. According to the Canadian Association of Speech-Language Pathologists and Audiologists, current conditions in these occupations are good and will remain good through 2004.
- Restructuring of health care may mean that the best opportunities are in the private sector and with community-based organizations.
- Almost all of the increase in employment requirements through 2004 for these occupations is expected to occur in private health practices, hospitals and other health and social services.

Earnings



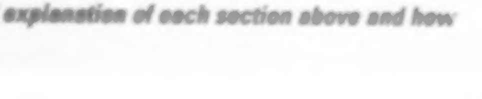
Overall Average for All Ages (15+)

43 019	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	FAIR
LIMITED	[✓ LIMITED]

Unemployment Rate



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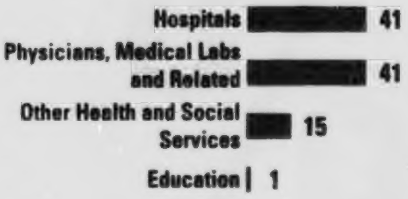
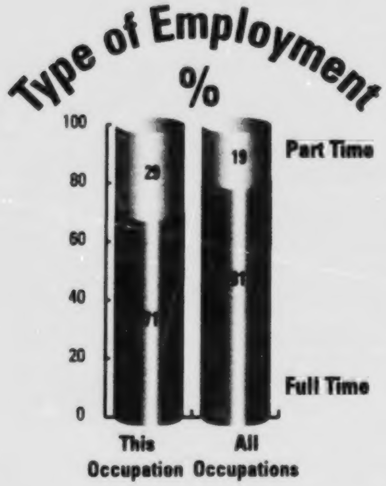
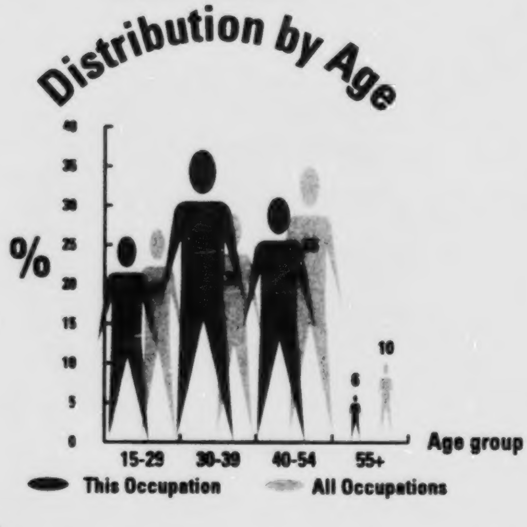
Physiotherapists

Where They Work







At Work

Physiotherapists work in hospitals, clinics, rehabilitation centres, extended care facilities and community health organizations; at work sites; and in clients' homes. Many physiotherapists work in private practice. Physiotherapists provide diagnostic and treatment services aimed at restoration or maintenance of function, and the prevention of disability or disfunction. They may focus on particular clinical areas such as neurology sciences, orthopedics, cardiorespiratory health or pediatrics or on the treatment of specific disorders or injuries such as sports injuries, burns or arthritis. Their duties may require them to:

- plan and implement individually designed programs of physical treatment to maintain, improve or restore patients' physical functions, alleviate pain and prevent physical problems;
- assess and test patients' physical abilities and evaluate their progress;
- include exercise, manipulations, massage, hydrotherapy and the use of electrotherapeutic and other mechanical equipment as part of their programs;
- maintain clinical and statistical records;
- confer with other health care professionals;
- develop and implement health promotion programs for patients, staff and the community; and
- act as physiotherapy consultants or educators.

Education, Training & Experience

- Physiotherapists must have a university degree in physiotherapy. Most recent entrants have an undergraduate university degree.
- To practise, they must be registered with provincial and territorial regulatory boards.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 314
Part 2 Field of Study Cross-index: U590, C560, C561, C891, U240

NOC 3142

In These Occupations...

- 16,000 people were employed in 1998, an increase of 47.4% from 1988. After employment gains of 14.9% from 1988 to 1993, employment grew 28.4% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 29% work part-time, compared to an average of 19% for all occupations.
- 25% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in this occupation has increased significantly over the last ten years.
- 83% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 1.1% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for professional occupations and for occupations in the health sector.
- the average earnings are among the lowest for professional occupations but are comparable to those for other occupations in the health sector.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since employment opportunities are well above average and earnings are at the average level for comparable occupations.
- Over the next five years, the outlook is expected to weaken to "Fair". A large influx of recent graduates looking for work in this occupation is expected to lead to rapid growth in the number of qualified job seekers. As a result, despite significant growth in employment opportunities, the number of job seekers is expected to exceed the number of job openings.
- Health care reform is redefining how and where physiotherapy services are provided, with private practices becoming increasingly important. The increasing needs of an aging population will be met in part by non-traditional forms of delivery.
- Almost all of the increase in employment requirements through 2004 for this occupation is expected to occur in private health practices, hospitals and other health and social services.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	46 243	52 351	55 899
Average	38 270	45 965	48 021
Lowest 20%	30 162	34 301	34 918

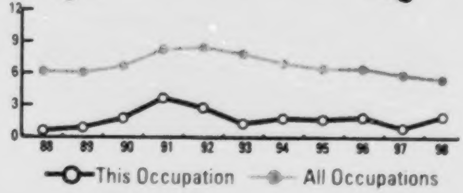
Overall Average for All Ages (15+)

This Occupation	All Occupations
45 131	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	GOOD
FAIR	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate



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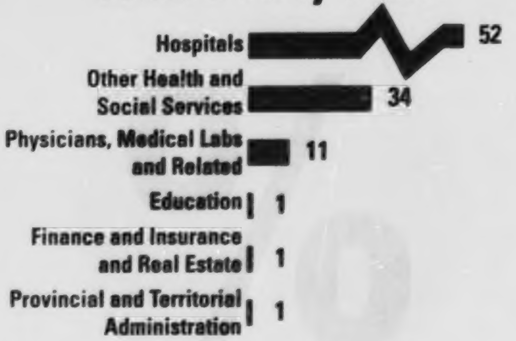
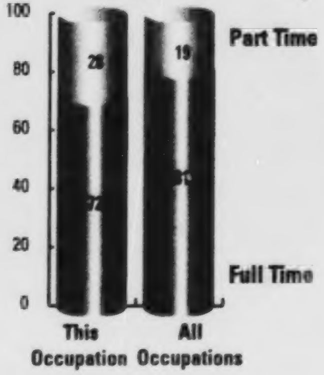
Occupational Therapists

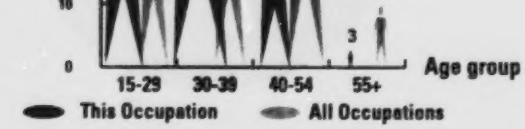
Where They Work



Type of Employment



Distribution by Age



At Work

Occupational therapists work in health care facilities, schools and private or public agencies or may be self-employed. They may specialize in working with a specific age group, such as children or elderly people, or with persons with distinct problems, such as dementia, traumatic brain injury or chronic pain, or may provide special programs such as return-to-work programs. Their duties may require them to:

- assess clients' capabilities to perform daily occupations through observation, interviews and standardized and informal assessments;
- develop intervention programs which address clients' performance in self-care, work and leisure activities;
- implement the intervention and evaluate its outcome;
- maintain client records;
- consult and advise on health risks in the workplace and on health promotion programs to prevent disability and to maximize function in all life activities;
- provide field-work education to student occupational therapists;
- conduct research in occupational therapy; and
- act as occupational therapy consultants or educators.

Education, Training & Experience

- Occupational therapists must hold an undergraduate or graduate university degree in occupational therapy from an accredited program. They must undergo a period of supervised practical training and pass a national certification examination. Most recent entrants have an undergraduate university degree.
- They must be registered with a provincial regulatory board. Some provinces may require a certification examination for registration.
- To specialize in a particular area, they may need additional training or further experience in that area.
- Occupational therapists have transferable skills, and management and administrative positions in the private and public health sectors are career options.

In These Occupations...

- 8,000 people were employed in 1998, an increase of 124.5% from 1988. This reflects an increase of 53.1% from 1988 to 1993 and 46.7% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 314
Part 2 Field of Study Cross-index: U590, C560, C561, C893, T891, C891

NOC 3143

- 28% work part-time, compared to an average of 19% for all occupations.
- 12% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in this occupation has increased significantly over the last ten years.
- 92% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 1.4% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for professional occupations.
- the average earnings are among the lowest for professional occupations but are comparable to those for other occupations in the health sector.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities are well above average and earnings are well below the average level for comparable occupations.
- Over the next five years, the outlook is expected to weaken to "Limited". A large influx of recent graduates looking for work in this occupation is expected to lead to rapid growth in the number of qualified job seekers. As a result, despite significant growth in employment opportunities, the number of job seekers is expected to exceed the number of job openings.
- Job growth in this field may be favoured by increasing acceptance of home and community care as a preferred alternative to institutional care.
- A rising elderly population and growing attention to the needs of disabled persons will increase demand for occupational therapists. However, the increased use of rehabilitation aides and restructuring of health care budgets may have an offsetting effect.
- The best opportunities for occupational therapists may be in the private sector. There is a growing trend toward self-employment of occupational therapists as consultants to industry, the education sector and other third parties.
- Most of the increase in employment requirements for this occupation through 2004 is expected to occur in hospitals and other health and social services.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	43 692	49 449	51 999
Average	37 429	43 549	43 493
Lowest 20%	31 673	36 536	34 835

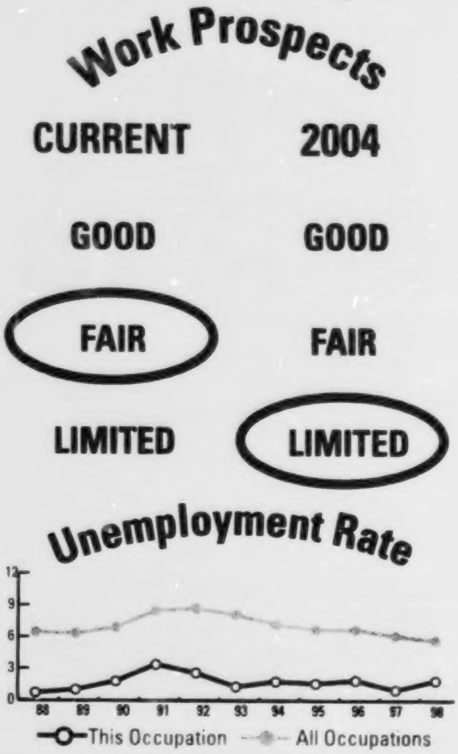
Overall Average for All Ages (15+)

This Occupation	All Occupations
41 849	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	FAIR
LIMITED	[✓ LIMITED]

Unemployment Rate



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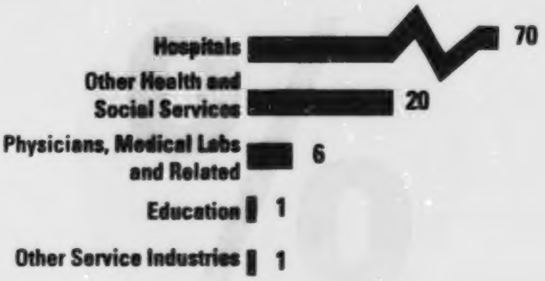
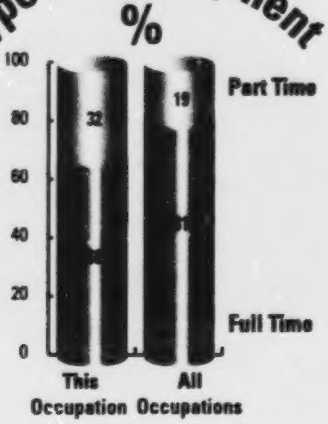
Nursing Supervisors and Registered Nurses

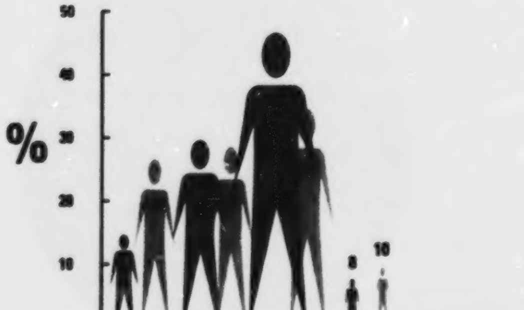
Where They Work



Type of Employment



Distribution by Age



At Work

These nurses work in government, hospitals and other health care institutions, nursing agencies, doctors' offices, companies and private homes.

- Head nurses and supervisors supervise and coordinate the activities of registered nurses and other nursing personnel.
- Registered nurses provide nursing care to patients and may specialize in surgery, neurology, emergency care, intensive care, obstetrics, gerontology or other areas of health care.
- Occupational health nurses develop and implement employee health education programs and provide nursing services in the workplace.
- Community health nurses provide health education and nursing care in public health units and through home visits.
- Psychiatric nurses provide nursing care to patients in psychiatric hospitals and mental health clinics.

This occupational group also includes nursing consultants and nursing researchers.

Education, Training & Experience

- These nurses (except registered psychiatric nurses) must complete a college or university registered nursing program. They must obtain provincial licences and may require membership in their professional associations. Most recent entrants have a community college diploma.
- Head nurses and supervisors need experience as registered nurses and may require a university degree or other studies in management or administration.
- To specialize, registered nurses must have additional academic training or experience. A master's or doctoral nursing degree is usually required for clinical nurse specialists, clinicians and consultants.
- Registered psychiatric nurses require completion of a college or other registered psychiatric nursing program.

Check out the 'big picture' in "World of Work: Overviews and Trends"

NOC 315

In These Occupations...

- 222,000 people were employed in 1998, an increase of 1.7% from 1988. However, after rising 6.9% over the 1988 to 1993 period, employment decreased 4.9% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 94% are registered nurses and the remainder are head nurses and supervisors.
- 33% work part-time, well above the average of 19% for all occupations.
- 1% are self-employed, well below the average of 17% for all occupations.
- 94% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 1.4% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for professional occupations.
- the average earnings are among the lowest for professional occupations and for occupations in the health sector.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities are well above average, although earnings are at the average level for all occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Nurses' roles will change as new technology continues to be introduced at the bedside and as nurses are allowed to perform acts previously restricted to physicians.
- Restructuring of the health care system, including the shift from institutional to home care, will change the requirements for nurses and move much of their employment from publicly funded hospitals to community settings and the private sector. Consequently, the best employment opportunities for nurses may be in these sectors.
- Almost all of the increase in employment requirements in these occupations through 2004 is expected to occur in hospitals, other health and social services and physicians' and other private health practices.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	35 200	43 300	45 700
Average	29 100	35 200	37 100
Lowest 20%	23 200	27 100	28 500

Age Group

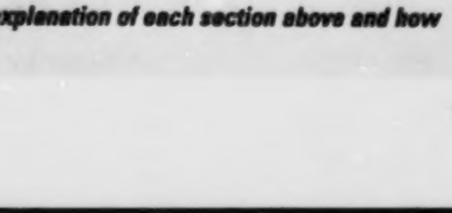
Overall Average for All Ages (15+)

This Occupation	All Occupations
35 100	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

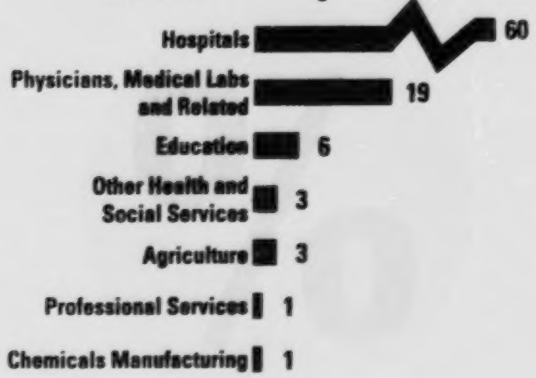
Unemployment Rate

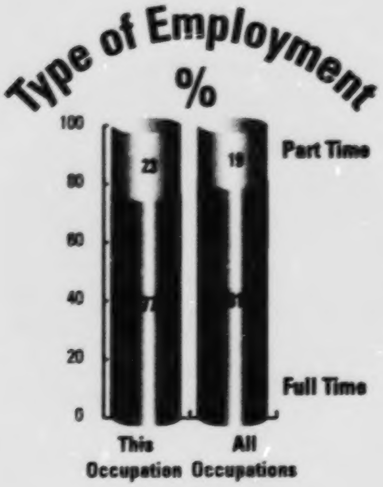


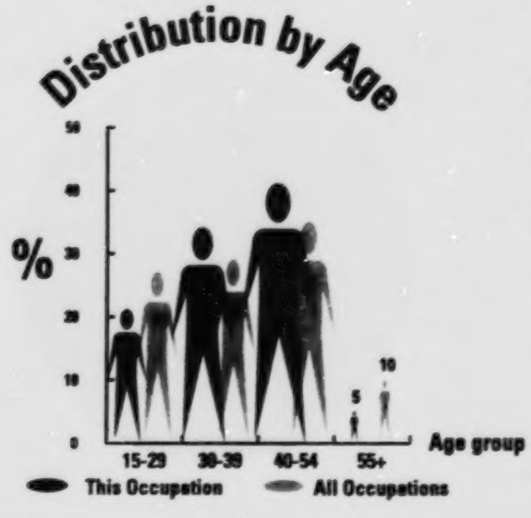
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Medical Technologists and Technicians (Except Dental)

Where They Work







At Work

People in this group work in hospitals, clinics and other health care institutions; government and other research laboratories; radiological and medical laboratories; universities; respiratory home care services; medical devices manufacturing companies; and other organizations.

- Medical laboratory technologists conduct experiments and analyses of medical specimens and samples.
- Medical laboratory technicians conduct supervised routine tests and maintain medical laboratory equipment.
- Pathologists' assistants assist at autopsies and examinations of surgical specimens and perform autopsies under supervision.
- Respiratory and radiation therapists; medical sonographers and radiological technologists; and nuclear medicine, cardiology, electromyography and electroencephalographic technologists perform diagnostic tests, X-rays and treatments.
- Clinical perfusionists operate and monitor circulation and other technical devices during open-heart surgery.
- Dietary technicians assist food service professionals.
- Prosthetists and orthotists design, build, fit and repair artificial limbs, braces and other prosthetics and orthotics.
- Prosthetic and orthotic technicians assist prosthetists and orthotists.

Education, Training & Experience

- People in this group must have a high school diploma and specialized training. Most recent entrants have a community college diploma.
- Most need a college program and supervised practical or clinical training.
- Many require registration or certification with their professional associations.
- Some need a provincial or territorial licence in their field of work.

In These Occupations...

- 67,000 people were employed in 1998, an increase of 23.5% from 1988. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 3211, 3212, 3215
Part 2 Field of Study Cross-Index: C560, C610, C550, C523, U530, M510, U630

NOC 321

- 30% are medical laboratory technicians; 26% are medical laboratory technologists and pathologists' assistants; and 19% are medical radiation technologists.
- 23% work part-time, compared to an average of 19% for all occupations.
- 1% are self-employed, well below the average of 17% for all occupations.
- 81% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 2.0% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for technical, paraprofessional and skilled occupations.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations and for other occupations in the health sector.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities are well above average and earnings are at the average level.
- Over the next five years, this outlook is not expected to change, as the number of job openings, partly due to a high retirement rate, is expected to be matched by the number of qualified job seekers in these occupations.
- New areas of work such as DNA testing should increase the demand for medical technologists. However, automation of diagnostic and treatment procedures may have an offsetting effect. The rapid development of new medical technologies means that medical technologists must continually update their skills.
- The restructuring of the health care system may limit opportunities in some of these occupations. The impact will vary widely among the different occupations in this group.
- Most of the increase in employment requirements through 2004 in these occupations is expected to occur in hospitals and private health practices and medical laboratories.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	40 200	48 400	51 800
Average	31 600	39 300	42 300
Lowest 20%	22 500	29 200	31 000

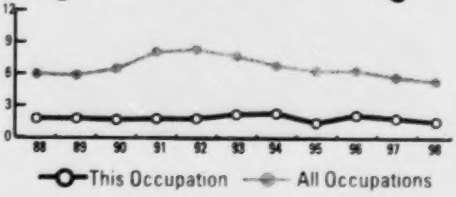
Overall Average for All Ages (15+)

This Occupation	All Occupations
39 000	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

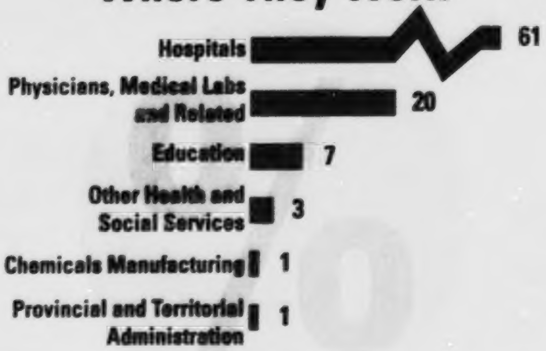
Unemployment Rate



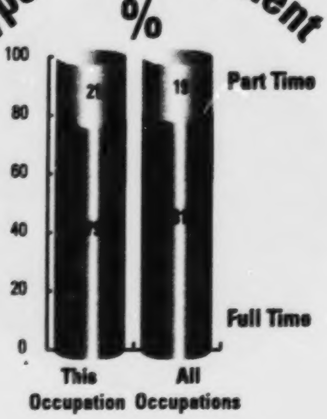
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Medical Laboratory Technologists and Pathologists' Assistants

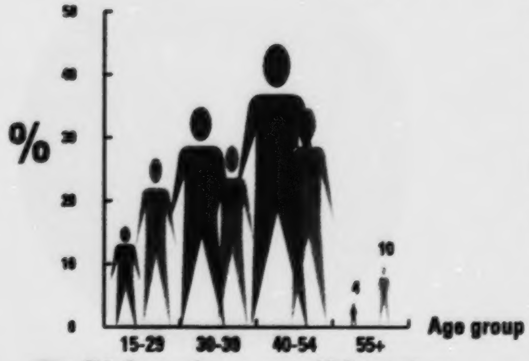
Where They Work



Type of Employment



Distribution by Age



At Work

People in this occupation work in medical laboratories in hospitals, private clinics, research institutions and universities.

- Medical laboratory technologists conduct medical laboratory tests, experiments and analyses to assist in the diagnosis, treatment and prevention of disease. They may conduct chemical analyses of body fluids, study blood cells and other tissue, and prepare tissue sections for microscopic examinations.
- Medical laboratory technologists may specialize in areas such as clinical chemistry, clinical microbiology, transfusion science, hematology, histotechnology and cytotechnology.
- Pathologists' assistants assist at autopsies and examinations of surgical specimens, or perform autopsies under pathologists' supervision. They may dissect, weigh and photograph organs and specimens for chemical analysis and record findings.

Education, Training & Experience

- People in this occupation must have a post-secondary qualification. Most recent entrants have an undergraduate university degree or a community college diploma.
- Medical laboratory technologists require either a bachelor of science or medical laboratory science degree or a two- to three-year college program in medical laboratory technology. They must also have a period of supervised training.
- Employers usually require that medical laboratory technologists be certified by the Canadian Society for Medical Laboratory Science.
- Medical laboratory technologists must be licensed by provincial regulatory bodies in New Brunswick, Quebec, Ontario, Saskatchewan and Alberta.
- Pathologists' assistants must have either a bachelor of science degree or training and experience as a registered nurse, registered nursing assistant or medical laboratory technologist. They must also have specialized on-the-job training.

In These Occupations...

- 17,000 people were employed in 1998, an increase of 31.5% from 1988. In comparison, employment in all occupations

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 321
Part 2 Field of Study Cross-index: U570, C550, C580, U523, U620

NOC 3211

grew 12.3% over the same ten years. This growth can be divided into two distinct periods. In the late 1980's and early 1990's employment growth was relatively strong. However, since that time, employment has declined, primarily as a result of restructuring in the health care sector.

- 21% work part-time, compared to an average of 19% for all occupations.
- 1% are self-employed, well below the average of 17% for all occupations.
- 82% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 1.6% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for technical, paraprofessional and skilled occupations.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations but are comparable to those for other occupations in the health sector.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since employment opportunities are well above average and earnings are above the average level for comparable occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings for these workers, partly due to a high retirement rate, is expected to be matched by the number of qualified job seekers in this occupation.
- New areas of work such as DNA testing should increase the demand for medical technologists. However, automation of diagnostic and treatment procedures may have an offsetting effect. The rapid development of new medical technologies means that medical technologists must continually update their skills.
- The restructuring of the health care system may limit opportunities in this occupation. In particular, restructuring may lead to increased use of automated equipment and substitution of lower-paid technicians for medical technologists.
- Almost all of the increase in employment requirements through 2004 for this occupation is expected to occur in hospitals and private health practices and medical laboratories.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	40 300	48 700	52 800
Average	32 700	40 500	44 500
Lowest 20%	24 900	32 400	35 700

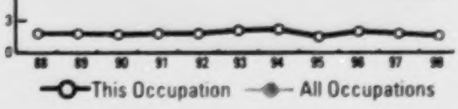
Overall Average for All Ages (15+)

This Occupation	All Occupations
41 000	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

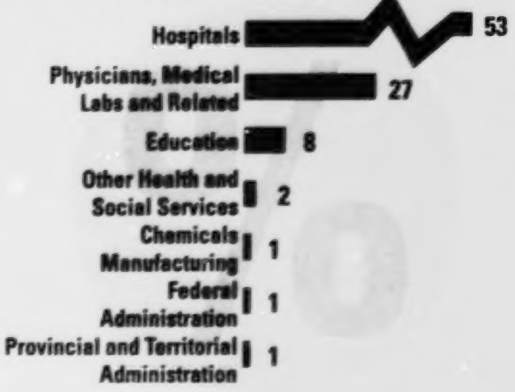
Unemployment Rate



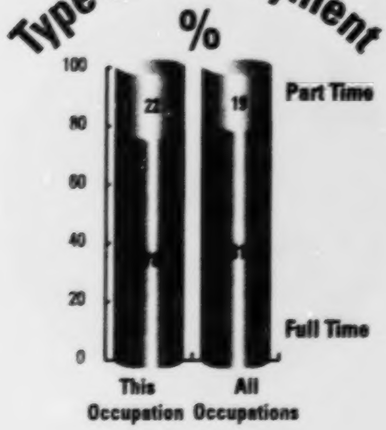
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Medical Laboratory Technicians

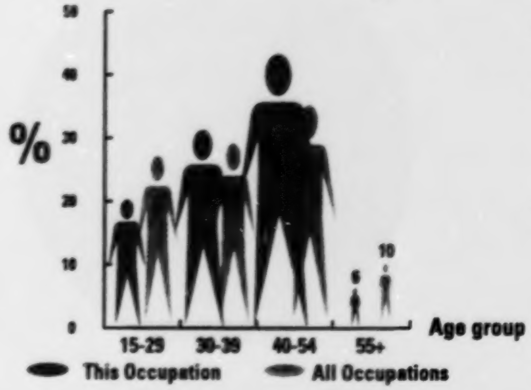
Where They Work



Type of Employment



Distribution by Age



At Work

Medical laboratory technicians work in medical laboratories in hospitals, clinics, research institutes, universities and government research laboratories. Their duties may require them to:

- collect blood tissue and other samples from patients;
- log patient samples and prepare them for testing;
- set up medical laboratory equipment;
- conduct routine laboratory tests and sample analyses; and
- clean and maintain medical laboratory and medical laboratory equipment.

Education, Training & Experience

- Medical laboratory technicians must complete either high school and on-the-job training, or a one- to two-year college program in medical technology. Most recent entrants have a community college diploma or an undergraduate university degree.
- In Quebec, medical laboratory technicians must belong to the Ordre professionnel des technologistes médicaux du Québec.

In These Occupations...

- 20,000 people were employed in 1998, an increase of 8.1% from 1988. However, after rising 19.4% over the 1988 to 1993 period, employment decreased 9.5% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 22% work part-time, compared to an average of 19% for all occupations.
- 1% are self-employed, well below the average of 17% for all occupations.
- 84% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 1.8% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for technical, skilled and paraprofessional occupations.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations but are among the lowest for occupations in the health sector.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 321
Part 2 Field of Study Cross-index: U570, C550, C580, U523, U620

NOC 3212

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities are above average and earnings are below the average level for comparable occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Restructuring of the health care system may lead to substitution of persons in this occupation for higher paid technologists. The best opportunities for medical laboratory technicians may be in private sector clinics and laboratories.
- Almost all of the increase in employment requirements through 2004 for this occupation is expected to occur in private health practices and medical laboratories and in hospitals.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	36 700	43 000	47 100
Average	29 000	34 500	38 200
Lowest 20%	20 800	25 100	27 200

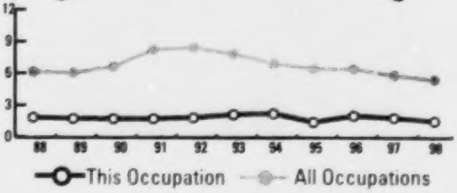
Overall Average for All Ages (15+)

This Occupation	All Occupations
35 000	37 400

Work Prospects

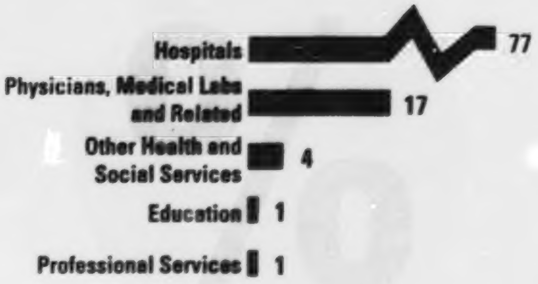
CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate



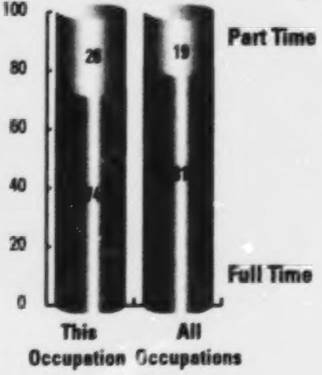
Medical Radiation Technologists

Where They Work

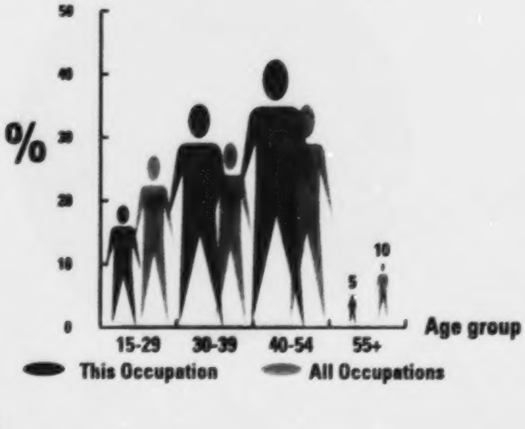


Type of Employment

%



Distribution by Age



At Work

People in this occupation work in hospitals, cancer treatment centres, clinics and radiological laboratories.

- Radiological technologists operate X-ray, radiographic and fluoroscopic equipment, specialized CT scanners and mammography units to produce images of the body for use by radiologists in the diagnosis of disease or injury.
- Nuclear medicine technologists operate radiation detection equipment such as gamma cameras, scanners, scintillation counters and ionization chambers to acquire information for use by nuclear medicine physicians in the diagnosis of disease.
- Radiation therapists operate linear accelerators, and cobalt-60, X-ray and other radiation therapy equipment to administer radiation treatment prescribed by radiation oncologists.

This occupation also includes mammography technologists, angiography technologists and magnetic resonance imaging technologists.

Education, Training & Experience

- Medical radiation technologists must complete a two- to three-year college, hospital-school or other approved program in their specialty: diagnostic radiography for radiological technologists, nuclear medicine technology for nuclear medicine technologists and radiation therapy for radiation therapists. Most recent entrants have a community college diploma.
- They must complete a period of supervised practical training.
- They must be certified by the Canadian Association of Medical Radiation Technologists or a provincial counterpart or an appropriate provincial governing body.
- In Quebec, medical radiation technologists must belong to the Ordre professionnel des technologues en radiologie du Québec.
- With experience, they may become supervisors, managers, commercial representatives and instructors.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 321
Part 2 Field of Study Cross-index: C580, C550, U523, U520

NOC 3215

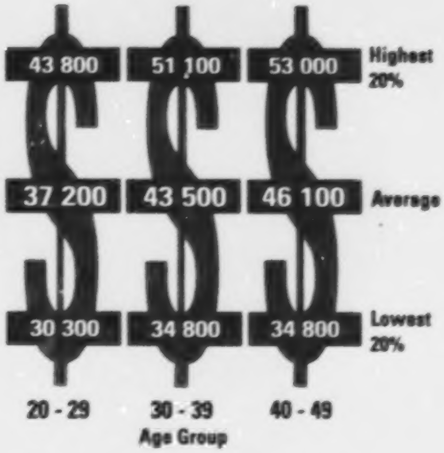
In These Occupations...

- 13,000 people were employed in 1998, an increase of 13.4% from 1988. Most of the growth occurred from 1993 to 1998, when employment increased 13.0%. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 26% work part-time, compared to an average of 19% for all occupations.
- 1% are self-employed, well below the average of 17% for all occupations.
- 81% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 1.6% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for technical, paraprofessional and skilled occupations.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations but are comparable to those for other occupations in the health sector.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since employment opportunities and earnings are both well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Technological change, in particular the introduction of sophisticated imaging technologies, will create new skill requirements in this field. The effect on demand for these technologists will depend on the extent of government funding for these new technologies. With restructuring of the health care system, the best opportunities for medical radiation technologists may be in private sector clinics.
- Almost all of the increase in employment requirements through 2004 for this occupation is expected to occur in hospitals and in private health practices and medical laboratories.

Earnings



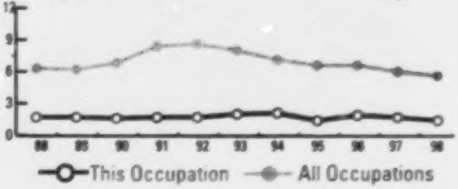
Overall Average for All Ages (15+)

This Occupation	All Occupations
43 600	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

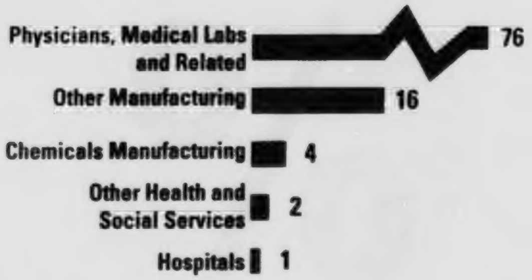
Unemployment Rate

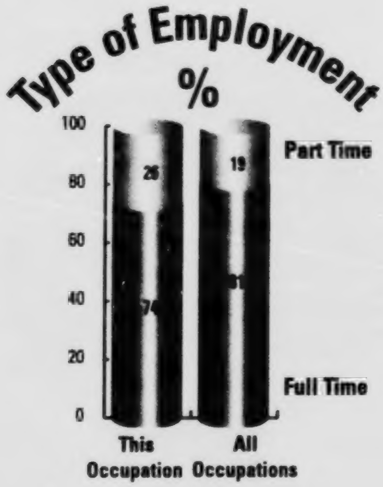


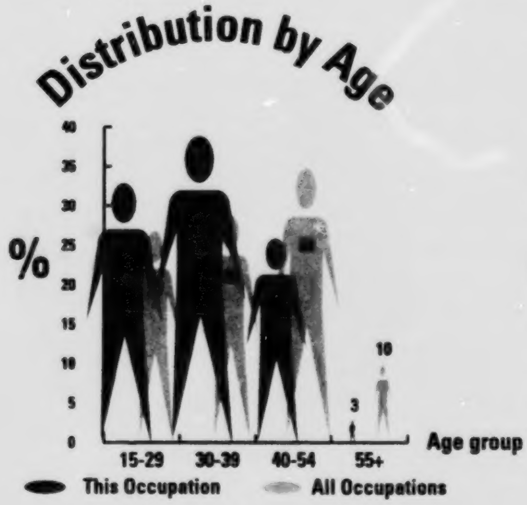
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Technical Occupations in Dental Health Care

Where They Work







At Work

People in this group work in government, public health, community care, dentists' offices and other health practices, clinics, dental laboratories, denture clinics, private industry, educational institutions, hospitals, dental hygiene clinics and mobile services.

- Dental hygienists provide a process of dental care including assessment, preventive care, treatment and evaluation.
- Dental therapists working for government in rural and remote locations provide limited dental services including filling cavities and extracting teeth.
- Dental technicians prepare and fabricate full and partial dentures and devices such as bridges, clasps and bands according to prescriptions from dentists and dental therapists.
- Denturists examine patients, make impressions, design and construct dentures, and fit, modify and repair dentures.

This group also includes dental bench workers.

Education, Training & Experience

- People in this group must have a high school diploma and usually need a college or university program in their specialty.
- Some may require licensing in their province or territory. Most recent entrants have a community college diploma.
- Dental hygienists must complete a two- to three-year college or university program or other approved program and be licensed by their provincial or territorial regulatory authority.
- Dental technicians must complete a college program in dental technology or four or more years of on-the-job training with a dental technician. Licensing is available but not mandatory in all provinces. In Quebec, they must be members of the Ordre professionnel des techniciens et techniciennes dentaires du Québec.
- Denturists must complete a college program and may be required to complete an internship program. Licensing is mandatory.

In These Occupations...

- 17,000 people were employed in 1998, an increase of 29.1% from 1988. Most of the growth occurred from 1993 to 1998, when employment increased 19.2%. In comparison,

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 3222
Part 2 Field of Study Cross-index: C531, U523, C561, T531

NOC 322

employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.

- 61% are dental hygienists and dental therapists; 30% are dental technicians and laboratory bench workers; and 9% are denturists.
- 26% work part-time, compared to an average of 19% for all occupations. The proportion of part-time workers in these occupations has increased significantly over the last ten years.
- 16% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in these occupations has decreased significantly over the last ten years.
- 79% are women, well above the average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 2.4% from 1996 to 1998, compared to the national average of 9.1%. This rate is among the lowest for technical, paraprofessional and skilled occupations.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations and for other occupations in the health sector.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities are above average and earnings are at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- An aging population and increased attention to dental hygiene may increase opportunities in these occupations. With the adoption of new technologies in dentistry and dental hygiene, persons in these occupations will need to continue to upgrade their skills.
- Almost all of the increase in employment requirements through 2004 for these occupations is expected to occur in private health practices and medical laboratories.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	44 700	52 000	56 400
Average	32 500	39 600	42 600
Lowest 20%	20 500	25 500	24 900

Age Group

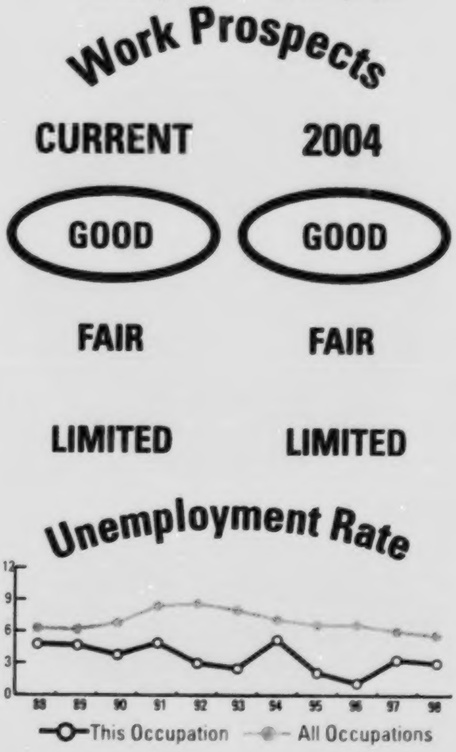
Overall Average for All Ages (15+)

This Occupation	All Occupations
38 900	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

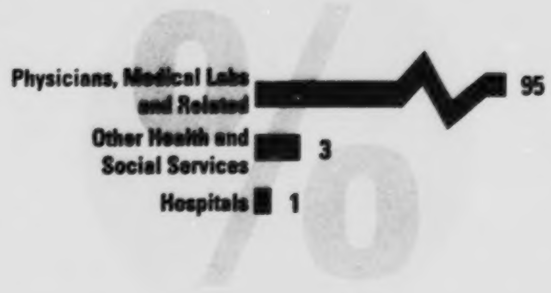
Unemployment Rate



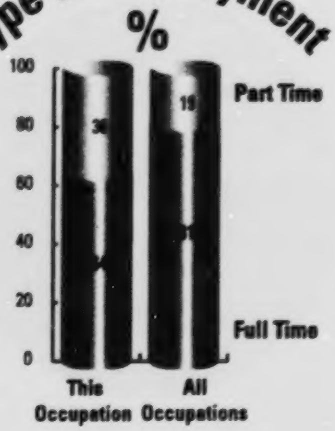
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Dental Hygienists and Dental Therapists

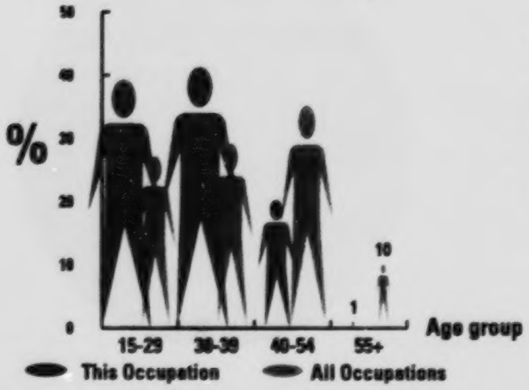
Where They Work



Type of Employment



Distribution by Age



At Work

Dental hygienists work in dentists' offices, dental hygienists' offices (in some provinces), hospitals, clinics, educational institutions, government agencies and private industry.

- Dental therapists work for the federal government and the governments of Manitoba, Saskatchewan and the Northwest Territories to provide services in rural and remote communities.
- Dental hygienists provide dental hygiene assessment and treatment and information related to the prevention of diseases and disorders of the teeth and mouth. They may take dental impressions, remove stains and deposits from teeth, take X-rays, clean and stimulate the gums and apply fluoride treatment.
- Dental therapists carry out limited dental services related to the prevention and treatment of diseases and disorders of the teeth and mouth. They may remove stains and deposits from teeth, take dental impressions and X-rays, fill cavities, extract teeth and replace portions of tooth crowns.

Education, Training & Experience

- People in these occupations require specialized training following graduation from high school. Most recent entrants have a community college diploma.
- Dental hygienists must complete a one- to three-year college or university program or another approved program in dental hygiene recognized by the governing board within their province or territory. They must obtain the national Dental Hygienist certificate and be registered by their provincial or territorial governing body.
- In Quebec, dental hygienists must belong to the Ordre professionnel des hygiénistes dentaires du Québec.
- Dental therapists must complete the dental therapy program offered by Health Canada or an approved college program in dental therapy.
- Dental therapists must be licensed in Saskatchewan, Manitoba and the Northwest Territories.

In These Occupations...

- 10,000 people were employed in 1998, an increase of 46.3% from 1988. After employment gains of 15.0% from 1988 to 1993, employment grew 27.2% from 1993 to 1998. In

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 322
Part 2 Field of Study Cross-index: C531, T531, U523

NOC 3222

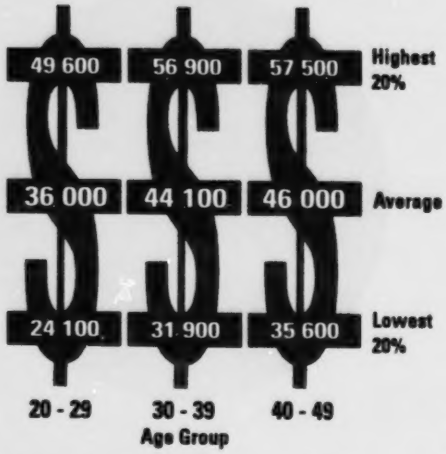
comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.

- 36% work part-time, well above the average of 19% for all occupations. The proportion of part-time workers in this occupation has increased significantly over the last ten years.
- 7% are self-employed, compared to an average of 17% for all occupations.
- 99% are women, well above the average of 45% for all occupations. The proportion of women in this occupation has increased significantly over the last ten years.
- the unemployment rate averaged 2.3% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for technical, paraprofessional and skilled occupations.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations but are comparable to those for other occupations in the health sector.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since employment opportunities are above average and earnings are above the average level for comparable occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- An aging population and increased attention to dental hygiene may increase opportunities in these occupations. With the adoption of new technologies in dentistry and dental hygiene, people in these occupations will need to upgrade their skills to remain licensed.
- New legislation in several provinces will allow dental hygienists to open private practices.
- Almost all of the increase in employment requirements through 2004 for this occupation is expected to occur in private health practices and medical laboratories.

Earnings



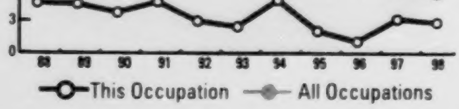
Overall Average for All Ages (15+)

42 100	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
LIMITED	LIMITED

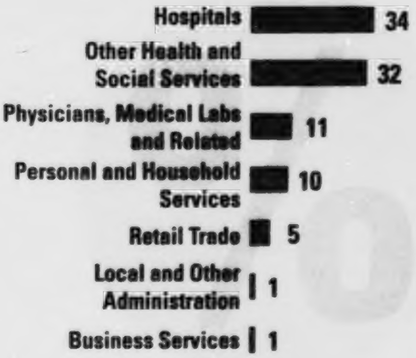
Unemployment Rate

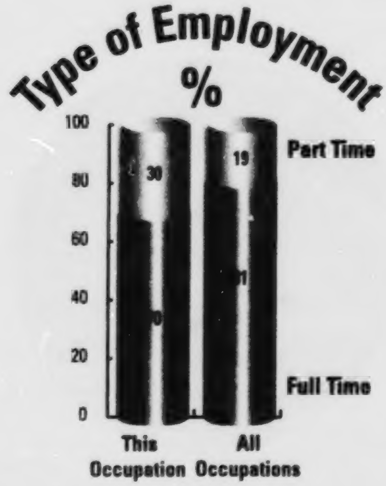


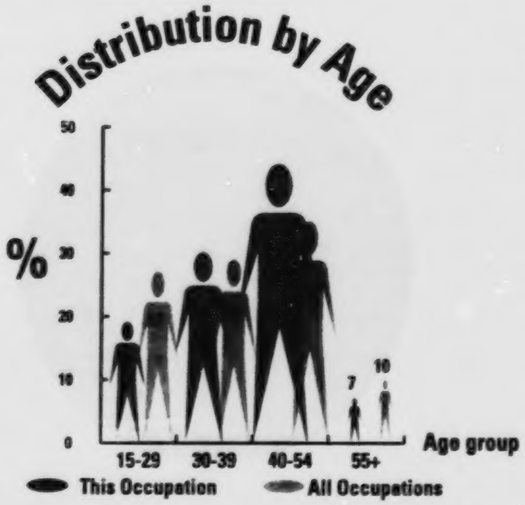
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Other Technical Occupations in Health Care (Except Dental)

Where They Work







At Work

People in this group work for optical retail stores and departments, hospitals and clinics, health clubs, spas, health food stores, health care institutions, ambulance services, fire departments, mining companies, government and private individuals.

- Opticians prepare or supervise the preparation of eyeglasses, contact lenses and low vision aids from prescriptions, and fit them on clients.
- Acupuncturists diagnose patients' physical problems and treat them with acupuncture needles and laser and electric stimulation.
- Chinese medical practitioners, herbalists, homeopaths, rolfers and reflexologists employ herbs, finger pressure, manipulation and other natural healing techniques.
- Registered nursing assistants provide nursing care to patients under the direction of doctors and nurses.
- Operating room technicians clean and sterilize operating rooms and instruments.
- Ambulance attendants and paramedics provide emergency medical care and transport patients to medical facilities.
- Audio prosthetists, physical rehabilitation technicians, and audiometric, communication and ophthalmic assistants provide technical support in their area of work.
- Massage therapists do massage therapy.

Education, Training & Experience

- People in this group usually need a high school diploma and specialized training at college, university or private institutes in their specialty. Most recent entrants have a community college diploma.
- Most must have supervised practical training.
- Many require registration or certification with their professional associations.
- Some need provincial or territorial licences.
- Ambulance attendants, paramedics and emergency vehicle operators require an appropriate driver's licence.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 3233
Part 2 Field of Study Cross-index: T562, C561, U560, C560, U580, C523, T561

NOC 323

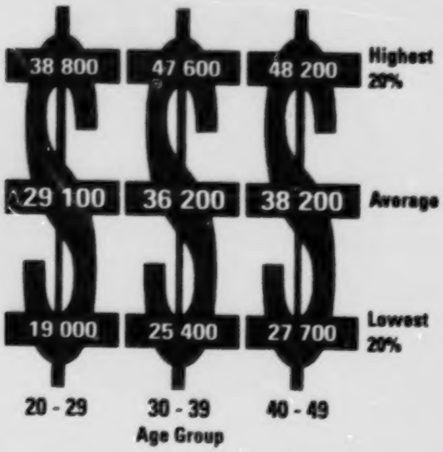
In These Occupations...

- 101,000 people were employed in 1998, an increase of 12.6% from 1988. After employment gains of 10.3% from 1988 to 1993, employment growth slowed to 2.1% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 55% are registered nursing assistants and 19% are ambulance attendants.
- 30% work part-time, well above the average of 19% for all occupations.
- 8% are self-employed, compared to an average of 17% for all occupations.
- 82% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 2.3% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for technical, paraprofessional and skilled occupations.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations but are among the lowest for occupations in the health sector.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities are above average and earnings are below the average level for comparable occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Restructuring of the health care system is likely to affect opportunities in all these occupations. The impact will vary widely among the different occupations in this group.
- Almost all of the increase in employment requirements through 2004 for these occupations is expected to occur in hospitals, other health and social services, private health practices and medical laboratories and personal and household services.

Earnings



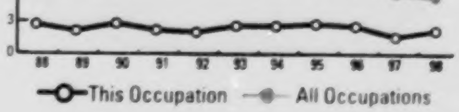
Overall Average for All Ages (15+)

36 000	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

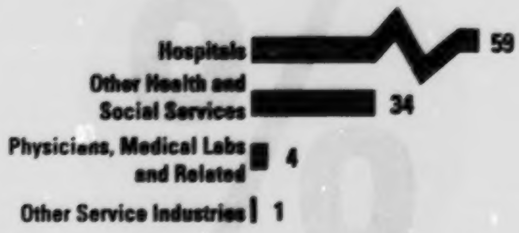
Unemployment Rate



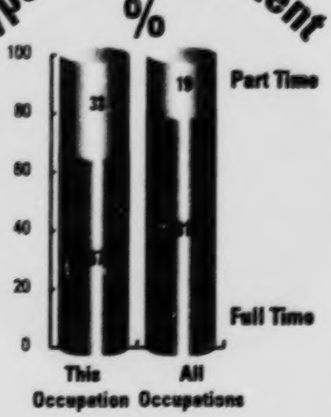
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Registered Nursing Assistants (Licensed/Registered Practical Nurses)

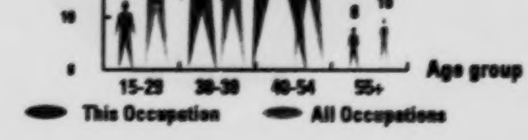
Where They Work



Type of Employment



Distribution by Age



At Work

Registered nursing assistants (or licensed/registered practical nurses) work in acute-care hospitals, extended-care facilities, rehabilitation centres, clinics, doctors' offices, wellness centres, companies, home-care agencies, community health centres and private homes.

- Registered nursing assistants (or licensed/registered practical nurses) provide nursing care for individuals, usually under the direction of medical practitioners, registered nurses or other health team members. They may provide direct nursing services including a wide range of nursing interventions such as checking vital signs, changing sterile dressings and teaching patients.
- They may prepare and administer medication, monitor established intravenous therapy and use various techniques to assist patients.
- Operating room technicians provide nursing care related to surgical procedures. They may prepare patients for surgery; assist in surgery by laying out instruments, setting up equipment, assisting surgical teams with gowns and gloves and passing instruments to surgeons; and clean and sterilize the operating room and instruments.

Education, Training & Experience

- People in this occupation must complete a vocational college or other approved program for registered nursing assistants (or licensed/registered practical nurses). Most recent entrants have a community college diploma.
- They require registration in all provinces and territories and must complete the National Practical Nurse registration examination in all provinces and territories (except Quebec). In Quebec, nursing assistants must belong to the Ordre des infirmières et infirmiers auxiliaires du Québec.
- Their titles vary by province. They are called licensed practical nurses in British Columbia, Alberta, Saskatchewan, Manitoba, Nova Scotia, Newfoundland, Prince Edward Island and the Yukon; registered practical nurses in Ontario; nursing assistants in Quebec; registered nursing assistants in New Brunswick; and certified nursing assistants in the Northwest Territories.
- Operating room technicians require either additional academic training in operating room techniques or on-the-job training.

Check out the 'big picture' in "World of Work: Overviews and Trends"

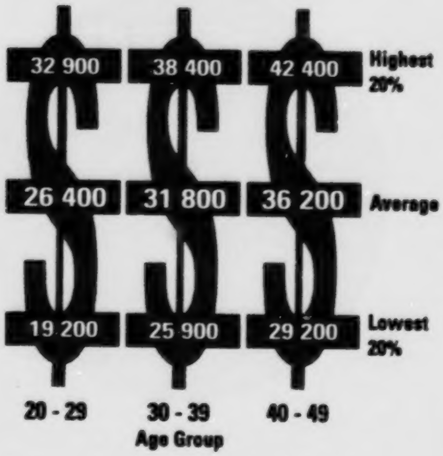
In These Occupations...

- 56,000 people were employed in 1998, an increase of 0.5% from 1988. However, after rising 6.4% over the 1988 to 1993 period, employment decreased 5.5% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 33% work part-time, well above the average of 19% for all occupations.
- 1% are self-employed, well below the average of 17% for all occupations.
- 99% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 2.5% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for technical, paraprofessional and skilled occupations but among the highest for occupations in health.
- the average earnings are among the lowest for technical, paraprofessional and skilled occupations and for occupations in the health sector.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities and earnings are at the average levels for all occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- The role of registered nursing assistants (or licensed/registered practical nurses) will change as more technology is introduced at the bedside.
- The shift from institutional to home care and the aging of the Canadian population will tend to increase demand for these workers, but will require them to learn new skills. As governments seek to restrain health delivery costs, hospitals may increasingly use registered nursing assistants (or licensed/registered practical nurses) to deliver nursing care. The growing complexity of nursing care and limiting of hospitalization to critically ill patients will place additional educational demands on registered nursing assistants (or licensed/registered practical nurses) employed in acute care.
- Almost all of the increase in employment requirements through 2004 for this occupation is expected to occur in hospitals and other health and social services.

Earnings



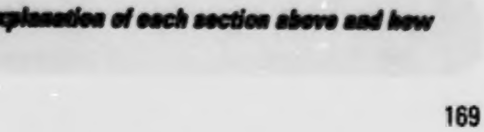
Overall Average for All Ages (15+)

33 400	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate



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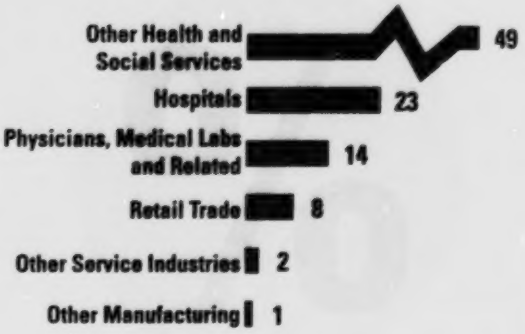
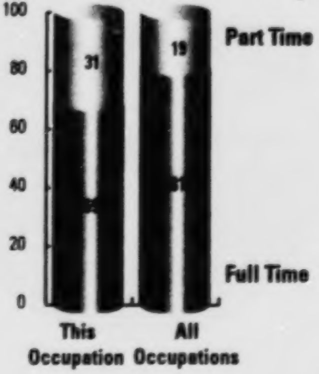
Assisting Occupations in Support of Health Services

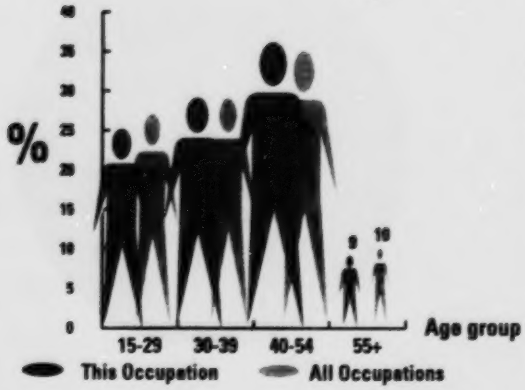
Where They Work



Type of Employment



Distribution by Age



At Work

People in this group work in dentists' offices, commercial dental laboratories, hospitals and other health care institutions, medical pathology laboratories, pharmacies and educational institutions.

- Dental assistants assist dentists during the examination and treatment of patients, and perform some clerical functions.
- Nurse aides and orderlies assist nurses and other health care workers in the basic care of patients, and transport patients in wheelchairs and on stretchers for treatment or surgery.
- Orthopedic technologists apply and adjust casts and splints on patients and assist orthopedic surgeons.
- Pharmacy assistants assist pharmacists in the preparation of prescriptions.
- Morgue attendants lay out instruments, transfer bodies and assist pathologists at autopsies.

Education, Training & Experience

- People in this group must have some high school or a high school diploma. Many recent entrants have a community college diploma.
- Dental assistants must complete a three-month to one-year college dental assistant program, or high school and on-the-job training. Those who perform duties such as taking X-rays and polishing and cleaning teeth require certification.
- Morgue attendants require on-the-job training.
- Nurse aides and orderlies require some secondary school and on-the-job training, or a program in nursing aid or health care at a college or private institute and practical training.
- Orthopedic technologists and pharmacy assistants must complete high school and have on-the-job training or a college program in their field of work.

In These Occupations...

- 169,000 people were employed in 1998, an increase of 44.8% from 1988. After employment gains of 24.7% from 1988 to 1993, employment growth slowed to 16.1% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.

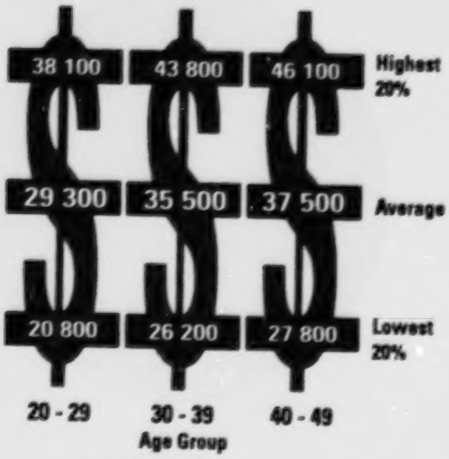
Check out the 'big picture' in "World of Work: Overviews and Trends"

- 75% are nurse aides and orderlies and 13% are dental assistants.
- 31% work part-time, well above the average of 19% for all occupations.
- 3% are self-employed, well below the average of 17% for all occupations.
- 85% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 3% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations with similar education/training requirements but among the highest for occupations in the health sector.
- the average earnings are comparable to those for other occupations with similar education/training requirements but are among the lowest for occupations in the health sector.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", as employment opportunities are above average and earnings are below average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Restructuring of the health care system may decrease opportunities in these occupations. A shift to home care may, however, prove favourable for many of these occupations. The effect of health care restructuring on the occupations in this group will vary widely among the different occupations.
- Trends which will affect work in these occupations include increasing computerization of patient records and greater use of machinery to lift patients.
- Almost all of the increase in employment requirements through 2004 for these occupations is expected to occur in health and social services, private health practices and medical laboratories and hospitals.

Earnings



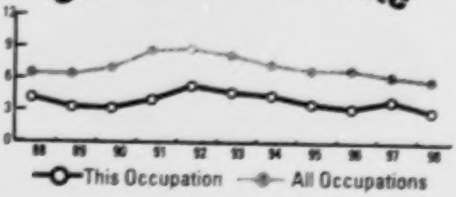
Overall Average for All Ages (15+)

35 100	37 400
This Occupation	All Occupations

Work Prospects

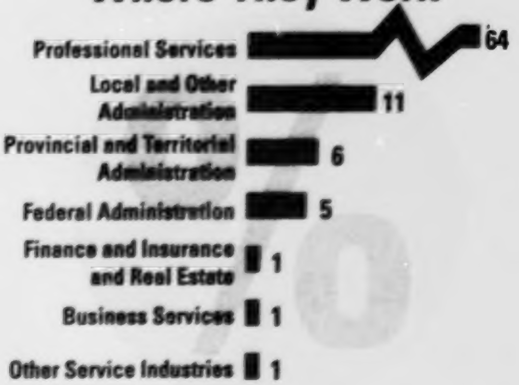
CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

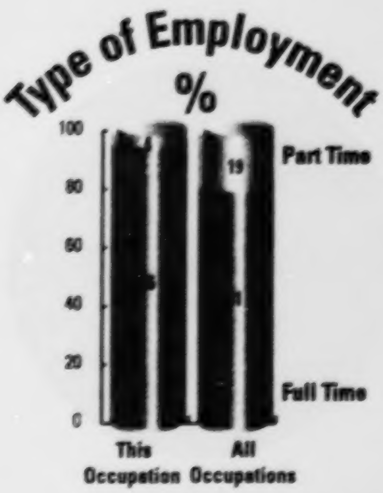
Unemployment Rate

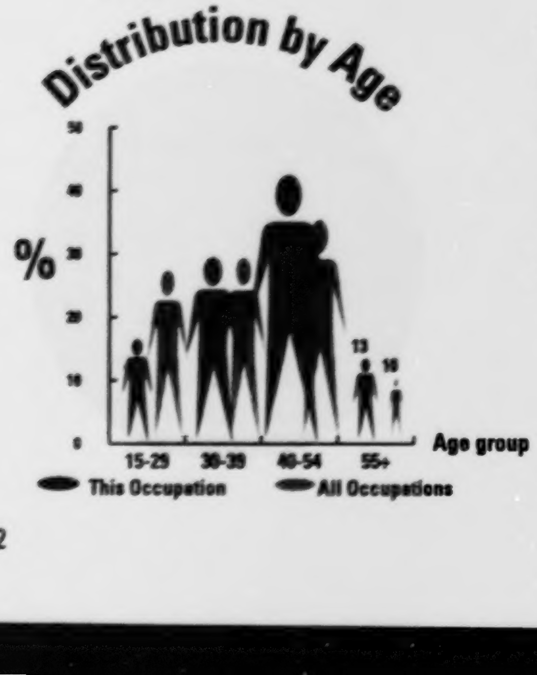


Judges, Lawyers and Quebec Notaries

Where They Work







At Work

Judges are appointed by federal or provincial cabinets. Lawyers and Quebec notaries work in law firms, notary offices, prosecutors' offices, governments and businesses. They may also be self-employed.

- Judges preside over courts of law, interpret and enforce rules of procedure, adjudicate civil and criminal cases and administer justice. They may specialize in particular areas of law such as civil, criminal and family law.
- Lawyers and Quebec notaries provide legal advice and represent clients; prepare contracts, wills and other legal documents; and may act as executors, trustees or guardians in estate and family law matters. They may specialize in specific areas of law such as criminal law (lawyers only) and corporate, real estate and labour law.
- Lawyers also plead cases or conduct prosecutions before courts of law, tribunals and boards, and negotiate civil dispute settlements.

This occupational group also includes articling students.

Education, Training & Experience

- People in this group require a pre-law college or university program and a bachelor's degree from a law school. Most recent entrants have an undergraduate university degree.
- Judges usually have extensive experience as lawyers or law professors and continuous bar association membership. They must be members in good standing with their provincial or territorial law societies or bar associations.
- Judges appointed to more senior positions in a court usually have experience as judges in that court.
- Lawyers require a period of articling, a bar admission course and exam, and a provincial or territorial licence.
- Quebec notaries must have a one-year course in notarial practice, a notary registration with the Chamber of Notaries and membership in the Ordre professionnel des notaires du Québec.

In These Occupations...

- 65,000 people were employed in 1998, an increase of 43.2% from 1988. After employment gains of 38.1% from 1988 to 1993, employment growth slowed to 3.6% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.

Check out the 'big picture' in "World of Work: Overviews and Trends"

NOC 411

- 96% are lawyers and Quebec notaries and 4% are judges.
- 4% work part-time, well below the average of 19% for all occupations.
- 54% are self-employed, well above the average of 17% for all occupations.
- 29% are women, well below the average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 1.8% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for professional occupations and for occupations in the social science, education, government service and religion sectors.
- the average earnings are among the highest for professional occupations and for occupations in the social science, education, government service and religion sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities and earnings are both well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- The high cost of legal services may lead to increased use of dispute-resolution systems in which lawyers' services are not mandatory. Also, electronic filings and the growth of computerized legal databases may increase the use of paralegal technicians at the expense of lawyers.
- The reform of the Quebec Civil Code has increased competition between lawyers and Quebec notaries.
- Almost all of the increase in employment requirements through 2004 for these occupations is expected to occur in the professional services industry.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	45 000	72 000	94 700
Average	34 000	53 500	68 400
Lowest 20%	20 100	26 000	28 900

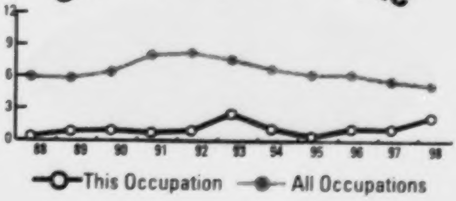
Overall Average for All Ages (15+)

This Occupation	All Occupations
62 400	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

Unemployment Rate



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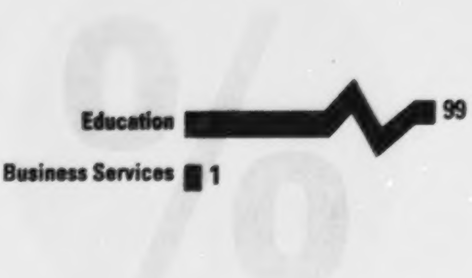
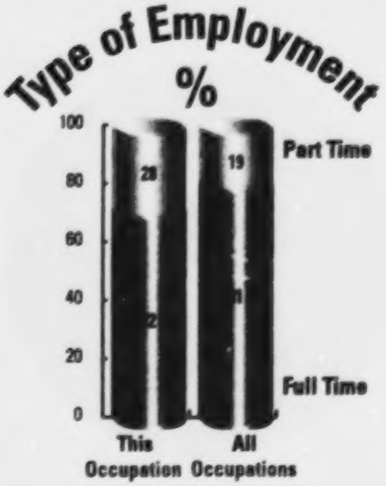
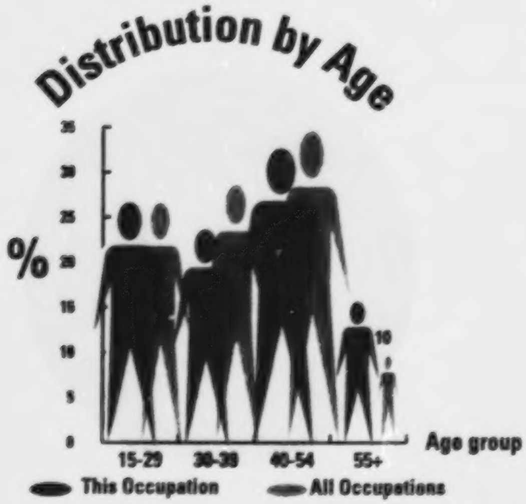
University Professors and Assistants

Where They Work







At Work

People in this group work for universities and degree-granting community colleges.

- University professors teach courses to undergraduate and graduate students; conduct lectures, laboratory sessions and discussion groups; participate in university governance; and direct and advise on research programs. They specialize in particular subjects such as anatomy, biology, chemistry, physics, geography, history, computer science, sociology, political science and engineering and conduct research in their area of specialization.
- Post-secondary teaching and research assistants organize reference and other materials; conduct literature searches, seminars and laboratory sessions; and perform other activities to assist university professors, community college teachers and other faculty members in teaching and research activities. They usually work in their field of study.

This occupational group also includes university instructors and lecturers, university department heads and post-doctoral fellows.

Education, Training & Experience

- People in this group are either in the process of obtaining a college or university degree or have completed a university degree. Most recent entrants have an undergraduate university degree.
- University professors require a doctoral degree in their field of study. They require licences or professional accreditation for teaching in certain regulated fields such as medicine, law, psychology, engineering and architecture.
- Post-secondary teaching and research assistants require enrollment in a college or university.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: U620, U750, M620, U220

NOC 412

In These Occupations...

- 85,000 people were employed in 1998, an increase of 13.4% from 1988. After employment gains of 12.1% from 1988 to 1993, employment growth slowed to 1.2% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 65% are university professors and 35% are postsecondary teaching and research assistants.
- 28% work part-time, compared to an average of 19% for all occupations.
- 1% are self-employed, well below the average of 17% for all occupations.
- 39% are women, compared to an average of 45% for all occupations.
- the unemployment rate averaged 5.0% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for professional occupations and for occupations in the social science, education, government service and religion sectors.
- the average earnings are among the highest for professional occupations and for occupations in the social science, education, government service and religion sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities are below average, although earnings are well above average.
- Over the next five years, this outlook is expected to improve to "Good", as the number of job openings created through retirement is expected to exceed the number of qualified job seekers.
- Many new hires may be for temporary or course appointments.
- Almost all of the increase in employment requirements through 2004 for these occupations is expected to occur in the education sector.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	36 200	55 900	63 200
Average	27 500	44 600	51 800
Lowest 20%	17 900	31 600	37 200

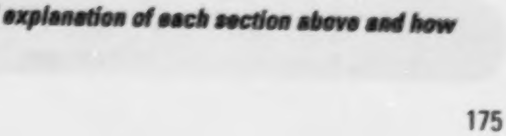
Overall Average for All Ages (15+)

This Occupation	All Occupations
52 300	37 400

Work Prospects

CURRENT	2004
GOOD	[✓ GOOD]
[✓ FAIR]	FAIR
LIMITED	LIMITED

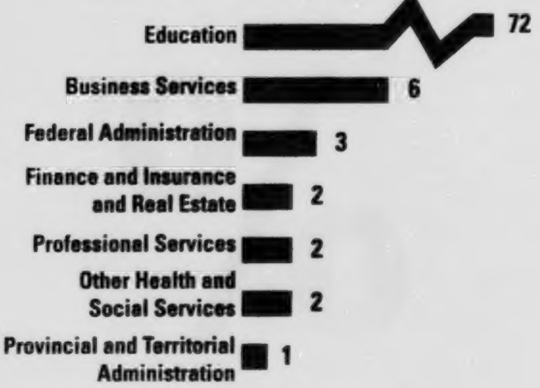
Unemployment Rate



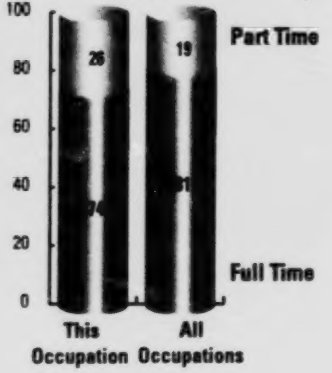
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

College and Other Vocational Instructors

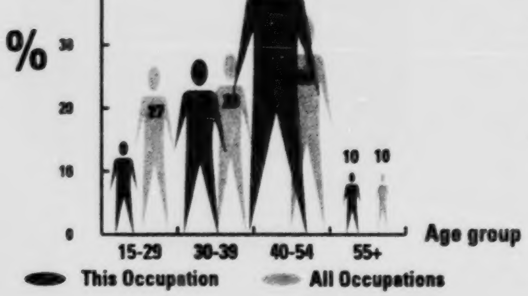
Where They Work



Type of Employment



Distribution by Age



At Work

These instructors work in community and agricultural colleges, technical institutes, language schools, Bible colleges and other vocational schools, private companies and government. They specialize in particular fields of study such as visual arts, dental hygiene, welding, and law and security. Their duties may require them to:

- teach students using lectures, demonstrations, discussion groups, shop sessions and seminars;
- prepare teaching materials and outlines for courses;
- prepare, administer and mark tests and papers;
- advise students on program curricula and career decisions; and
- serve on faculty committees that deal with matters such as budgets, curriculum revision and course and diploma requirements.

This occupational group also includes CEGEP teachers, company trainers and government training officers.

Education, Training & Experience

- These instructors must have a college diploma or bachelor's degree or demonstrated expertise in their field of instruction. They may require a master's degree. Most recent entrants have an undergraduate university degree or a community college diploma.
- Trades instructors need trade certification, completion of apprenticeship training and additional courses in teaching.
- With experience, they may progress to administrative positions.

In These Occupations...

- 78,000 people were employed in 1998, an increase of 30.6% from 1988. After employment gains of 16.6% from 1988 to 1993, employment growth slowed to 12.0% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 26% work part-time, compared to an average of 19% for all occupations. The proportion of part-time workers in these occupations has increased significantly over the past ten years.
- 10% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: U230, U403, M120, M403, C580, T720, M230, M402, C720, U720

NOC 413

in these occupations has increased significantly over the last ten years.

- 50% are women, compared to an average of 45% for all occupations.
- the unemployment rate averaged 4.9% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for professional occupations and for occupations in the social science, education, government service and religion sectors.
- the average earnings are among the lowest for professional occupations but are comparable to those for other occupations in the social science, education, government service and religion sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Technological change is making itself felt in the classroom through the increased use of computers and the use of more sophisticated machinery in technical courses, so instructors may need to upgrade their skills.
- Government funding cutbacks may restrict demand for college instructors. On the other hand, aging of the population of instructors may open positions through retirement or death; however, many of these may be filled on a part-time or temporary basis.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the education and business services industries.

Earnings

20 - 29	30 - 39	40 - 49	
38 500	46 000	53 000	Highest 20%
30 200	36 800	43 900	Average
22 200	27 700	34 800	Lowest 20%

Age Group

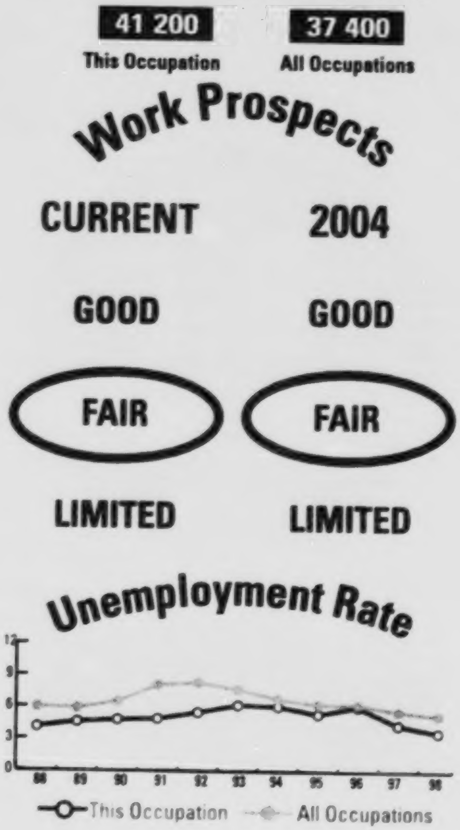
Overall Average for All Ages (15+)

This Occupation	All Occupations
41 200	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

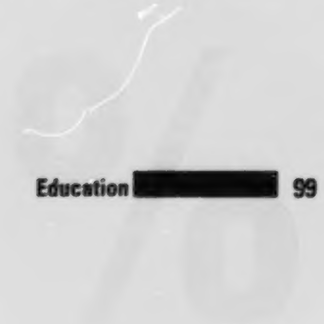
Unemployment Rate

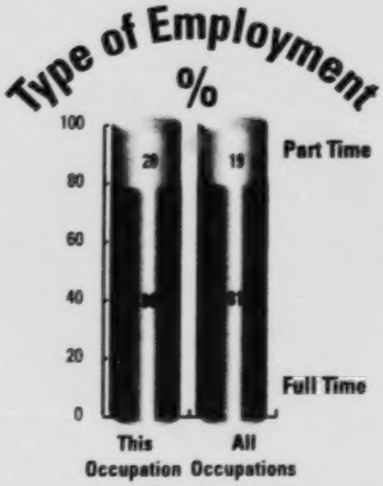


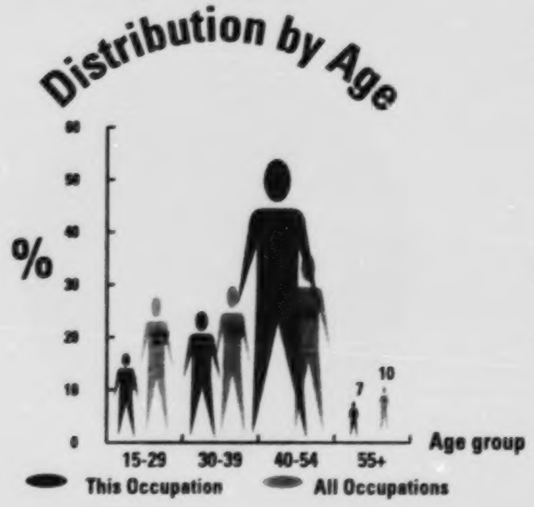
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Secondary and Elementary School Teachers and Counsellors

Where They Work







At Work

People in this group work for public and private elementary and high schools and school boards.

- High school teachers prepare and teach academic, technical, vocational and specialized subjects. They may specialize in mathematics, science, computer science, history, vocational and technical education and other subjects.
- Elementary school teachers teach basic subjects such as reading, writing, arithmetic, social studies, physical education, music, art and other subjects. They may specialize in areas such as special education and second-language instruction.
- Kindergarten teachers teach subjects such as reading readiness and number work and introduce students to music, art and literature. They also organize and conduct games and other activities to promote their students' physical, mental and social development.
- School and guidance counsellors advise students on educational issues, career planning and personal development, and coordinate the provision of counselling services to students, parents and teachers. They also administer and interpret standardized intelligence, aptitude and interest tests, and may teach regular classes.

This occupational group also includes department heads, school librarians and supply teachers.

Education, Training & Experience

- People in this group require a bachelor's degree in education. Most recent entrants have an undergraduate university degree.
- They require provincial teaching certificates.
- Special education teachers and second-language instructors often need additional training.
- Teachers of vocational and technical subjects usually must have several years' training or experience in their fields, and sometimes may have a certificate in education, rather than a bachelor's degree.

In These Occupations...

- 384,000 people were employed in 1998, an increase of 16.0% from 1988. After employment gains of 10.2% from 1988 to 1993, employment growth slowed to 5.2% from 1993

Check out the 'big picture' in "World of Work: Overviews and Trends"

to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.

- 58% are elementary and kindergarten teachers and 39% are secondary school teachers.
- 20% work part-time, compared to an average of 19% for all other occupations.
- 1% are self-employed, well below the average of 17% for all occupations.
- 68% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 2.8% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are comparable to those for other professional occupations and for other occupations in the social science, education, government service and religion sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities are average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- There may be shortages of teachers in isolated areas, in contrast to surpluses in urban areas.
- The aging of the population of teachers will create openings through retirement and death. This tendency may be accelerated by departure incentives as governments try to restrain educational costs. In a climate of restraint, many positions will be filled as supply teacher positions, work-sharing positions and part-time specialty teaching positions.
- All of the increase in employment requirements through 2004 for these occupations is expected to occur in education.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	37 500	47 400	57 900
Average	30 900	39 200	47 600
Lowest 20%	24 400	31 600	39 500

Age Group

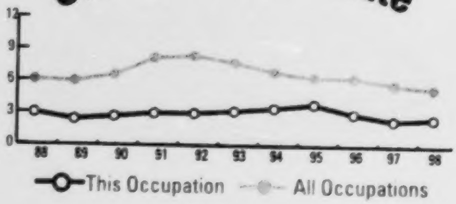
Overall Average for All Ages (15+)

This Occupation	All Occupations
44 000	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

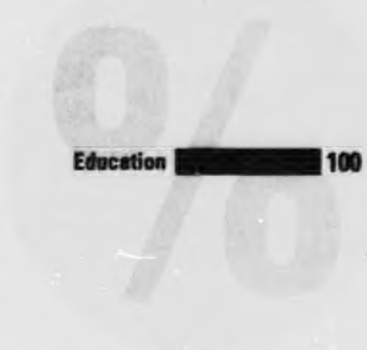
Unemployment Rate



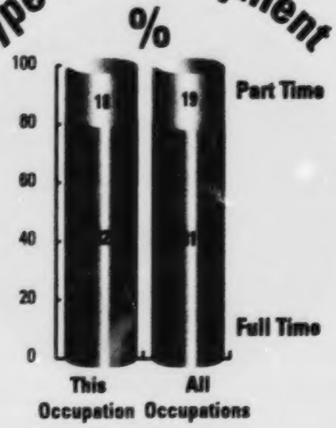
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Secondary School Teachers

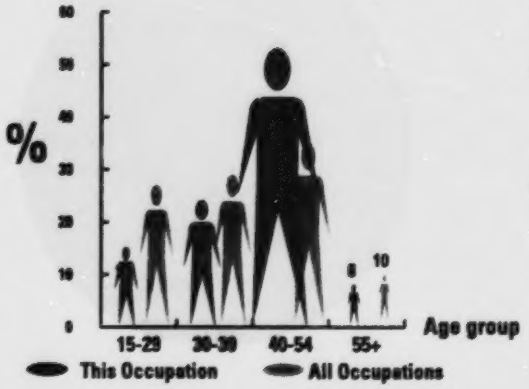
Where They Work



Type of Employment



Distribution by Age



At Work

These teachers work in private and public secondary schools. Their duties may require them to:

- prepare and present subject material to students according to an approved curriculum;
- teach students using a systematic plan of lectures, discussions, audio-visual presentations, and laboratory, shop and field studies;
- assign and correct homework;
- prepare, administer and correct tests;
- evaluate students' progress and discuss results with students, parents and school officials;
- participate in staff meetings, educational conferences and teacher training workshops; and
- advise students on course selection and on vocational and personal matters.

This occupation also includes teachers who are school department heads, school librarians, special education teachers and vocational teachers.

Education, Training & Experience

- Teachers must have a bachelor's degree in education and a provincial teaching certificate. Most recent entrants have an undergraduate university degree.
- Teachers of academic subjects often must have a bachelor's degree in arts or science before obtaining their degree in education or must specialize in a specific subject matter in the course of obtaining their degree in education.
- Teachers of vocational and technical subjects usually must have several years' training or experience in their field before obtaining their bachelor's degree or certificate in education.
- School department heads usually require several years' teaching experience.
- With additional training, or as a result of specialization during their bachelor's degree studies, teachers may specialize in special education or English or French as a second language.
- With experience, they may progress to vice-principal or other administrative positions in the educational system.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 414
Part 2 Field of Study Cross-index: U230, C210, U250, M230, U240

NOC 4141

In These Occupations...

- 151,000 people were employed in 1998, an increase of 16.5% from 1988. After employment gains of 14.8% from 1988 to 1993, employment growth slowed to 1.5% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 18% work part-time, compared to an average of 19% for all occupations.
- 1% are self-employed, well below the average of 17% for all occupations.
- 50% are women, compared to an average of 45% for all occupations.
- the unemployment rate averaged 3.6% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are comparable to those for other professional occupations and for other occupations in the social science, education, government service and religion sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities are average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Government spending restraints may continue to limit employment growth; however, retirement incentives may lead to an increased demand for replacements. Part-time work is expected to be a major source of job openings over the next five years. Technological change, such as use of computers and the Internet, is likely to affect teaching methods, but will have little impact on employment levels.
- All of the increase in employment requirements through 2004 for this occupation is expected to occur in education.

Earnings

20 - 29	30 - 39	40 - 49	
38 100	48 300	59 900	Highest 20%
31 600	40 200	49 200	Average
26 100	33 000	41 600	Lowest 20%

Age Group

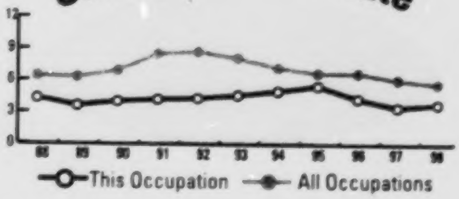
Overall Average for All Ages (15+)

This Occupation	All Occupations
45 700	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate



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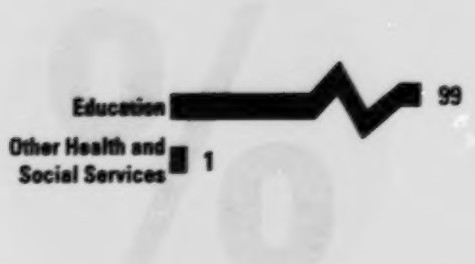
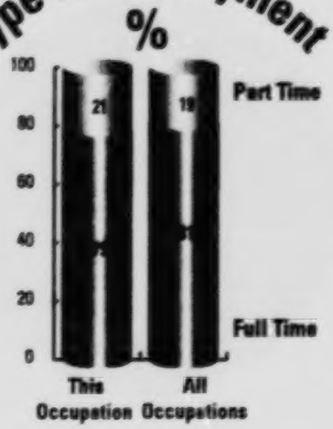
Elementary and Kindergarten Teachers

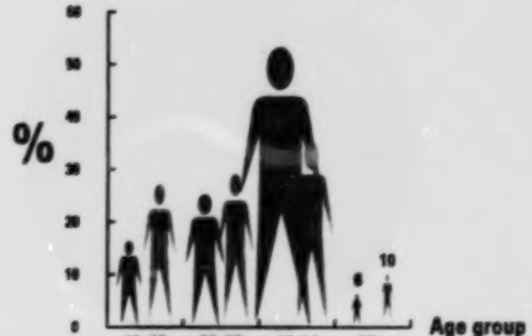
Where They Work



Type of Employment



Distribution by Age



At Work

People in this group work in private and public elementary schools. Their duties may require them to:

- prepare and present courses to students according to an approved curriculum;
- teach students using a systematic plan of lessons, discussions, audio-visual presentations and field trips;
- lead students in activities to promote their physical, mental and social development and their school readiness;
- assign and correct homework;
- prepare, administer and correct tests;
- evaluate students' progress and discuss results with students, parents and school officials; and
- participate in staff meetings, educational conferences and teacher training workshops.

This occupation also includes elementary school librarians and special education teachers.

Education, Training & Experience

- People in this occupation require a bachelor's degree in education and a provincial teaching certificate. Most recent entrants have an undergraduate university degree.
- They need additional training or specialization during their bachelor's degree studies to specialize in special education.
- They need an additional certificate or specialization during their bachelor's degree studies to teach English or French as a second language.
- With experience, they may progress to positions such as education consultant or school principal.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 414
Part 2 Field of Study Cross-index: U230, C210, U250, M230, U240

NOC 4142

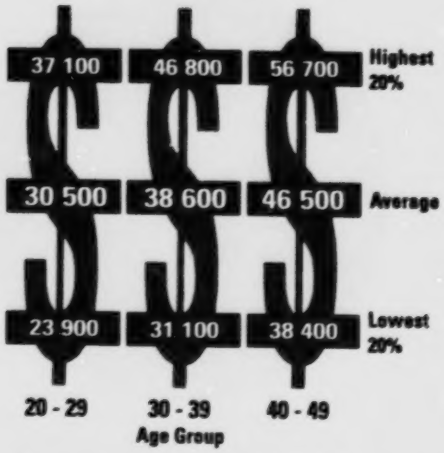
In These Occupations...

- 221,000 people were employed in 1998, an increase of 8.8% from 1988. This reflects an increase of 5.1% from 1988 to 1993 and 3.5% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 21% work part-time, compared to an average of 19% for all occupations. The proportion of part-time workers in this occupation has increased significantly over the last ten years.
- 1% are self-employed, well below the average of 17% for all occupations.
- 81% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 2.2% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are comparable to those for other professional occupations and for other occupations in the social science, education, government service and religion sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Government spending restraints may continue to limit employment growth; however, retirement incentives may increase demand for replacements. Part-time work is expected to be a major source of job openings.
- All of the increase in employment requirements through 2004 for this occupation is expected to occur in education.

Earnings



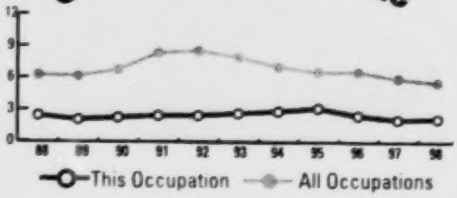
Overall Average for All Ages (15+)

42 700	37 400
This Occupation	**All Occupations**

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

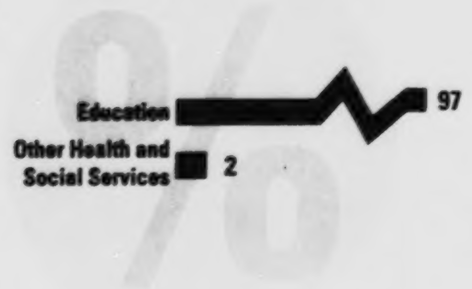
Unemployment Rate



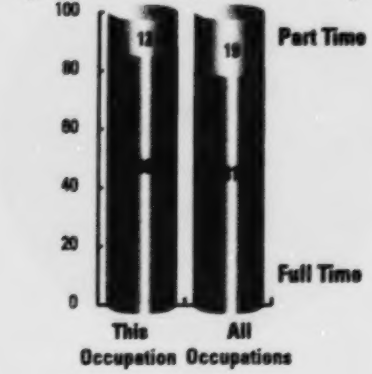
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

School and Guidance Counsellors

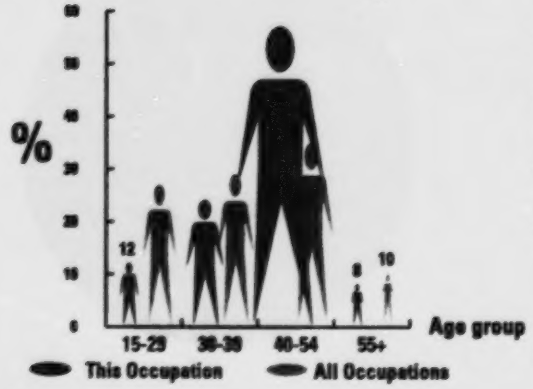
Where They Work



Type of Employment



Distribution by Age



At Work

These counsellors work for school boards and in elementary and high schools. Their duties may require them to:

- counsel students on course selection, school adjustment, truancy, study habits and career planning;
- counsel students on personal and social issues such as substance abuse, depression, sexuality, self-esteem and family problems;
- consult with teachers, parents, school administrators and community agencies;
- coordinate the provision of counselling and information services such as career information services and professional development sessions for students, parents and teachers; and
- administer and interpret standardized intelligence, aptitude and interest tests.

Education, Training & Experience

- These counsellors require a bachelor's degree in education and a teacher's certificate in the province where they work.
- They usually require graduate courses in counselling and master's level preparation is strongly preferred.
- They usually require some teaching experience.
- In Quebec, they must be members of the Ordre professionnel des conseillers et conseillères d'orientation du Québec.

In These Occupations...

- 11,000 people were employed in 1998, an increase of 28.4% from 1988. After employment gains of 18.2% from 1988 to 1993, employment growth slowed to 8.7% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 12% work part-time, compared to an average of 19% for all occupations.
- 1% are self-employed, well below the average of 17% for all occupations.
- 64% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 2.5% from 1996 to 1998, compared to the national average of 6.0%.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 414
Part 2 Field of Study Cross-index: M220, U230, U870, U880, C891

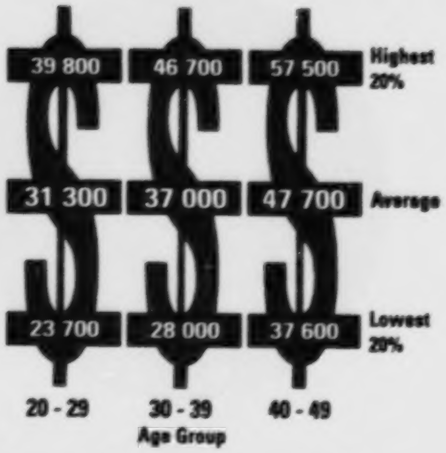
NOC 4143

- the average earnings are comparable to those for other professional occupations and for other occupations in the social science, education, government service and religion sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since employment opportunities and earnings are both above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Government spending restraints may affect employment in these occupations more than in other occupations in teaching. Part-time work and positions shared between schools are likely to be a major source of job openings over the next five years.
- All of the increase in employment requirements through 2004 for this occupation is expected to occur in education.

Earnings



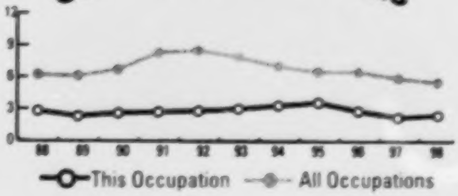
Overall Average for All Ages (15+)

45 300	37 400
This Occupation	All Occupations

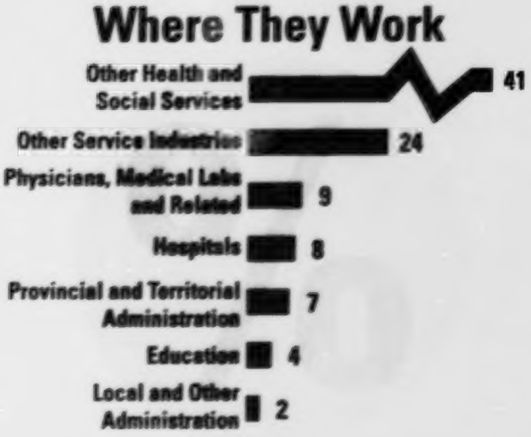
Work Prospects

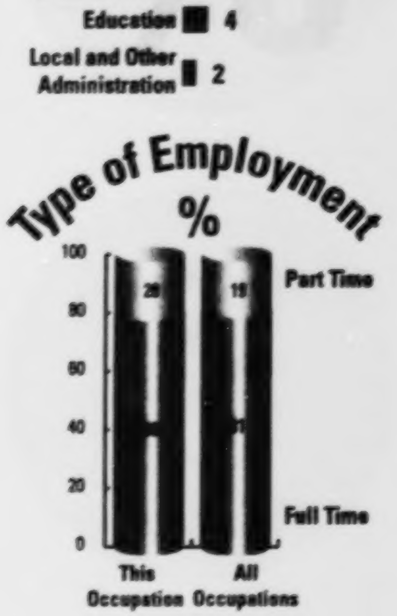
CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

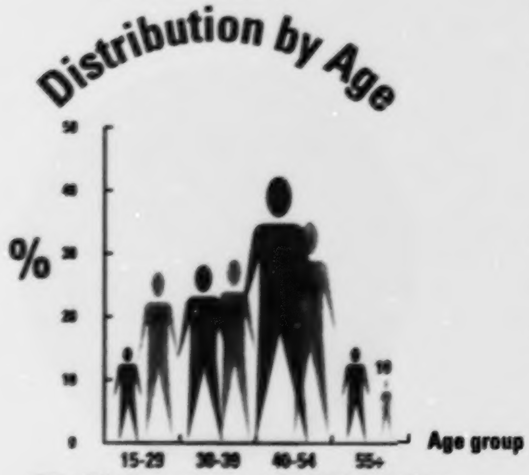
Unemployment Rate



Psychologists, Social Workers, Counsellors, Clergy and Probation Officers







At Work

People in this group work for government, clinics, correctional facilities, health care institutions, social service agencies, welfare organizations, school boards, schools, universities, churches, synagogues, temples and other places of worship. They may work in private practice.

- Psychologists diagnose psychological and emotional disorders, counsel clients, provide therapy and conduct research.
- Social workers provide counselling and therapy and referrals to other supportive social services.
- Counsellors assist individual clients and groups to overcome personal problems and achieve personal goals.
- Ministers of religion conduct religious services and provide spiritual and moral guidance.
- Parole officers monitor criminal offenders released from prison to serve the remainder of their sentences in the community.

This occupational group also includes probation officers and classification officers in correctional institutions.

Education, Training & Experience

- People in this group usually require a bachelor's degree in their area of work. Some require a master's or doctoral degree in a specific or related discipline. Most recent entrants have an undergraduate university degree.
- They usually need supervised practical experience.
- Some must complete provincial exams and have provincial certificates and membership in their professional associations.

In These Occupations...

- 107,000 people were employed in 1998, an increase of 46.8% from 1988. After employment gains of 26.8% from 1988 to 1993, employment growth slowed to 15.7% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 34% are social workers; 27% are family and marriage counsellors; 23% are ministers of religion; and 13% are psychologists.
- 20% work part-time, compared to an average of 19% for all occupations. The proportion of part-time workers in these

Check out the 'big picture' in "World of Work: Overviews and Trends"

occupations has increased significantly over the last ten years.

- 9% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 57% are women, well above the average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 2.4% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the lowest for professional occupations and for occupations in the social science, education, government service and religion sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities are above average and earnings are below the average level for comparable occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Government spending restraint in health and social services may have a negative impact on employment requirements in these occupations. The best opportunities may be in the private sector.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in health and social services and in private health practices.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	38 200	47 600	52 200
Average	30 400	37 600	41 000
Lowest 20%	23 700	27 700	28 300

Age Group

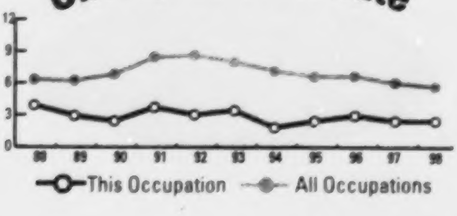
Overall Average for All Ages (15+)

This Occupation	All Occupations
37 900	37 400

Work Prospects

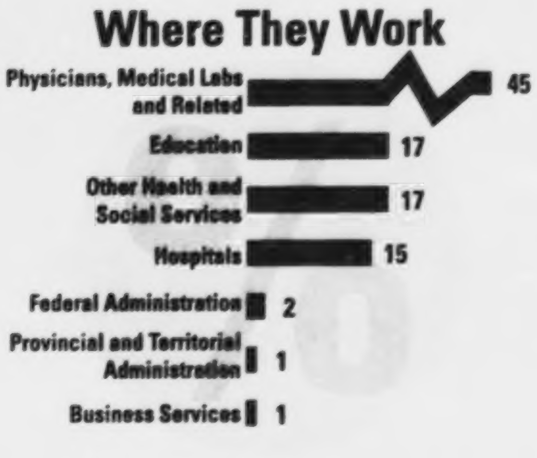
CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

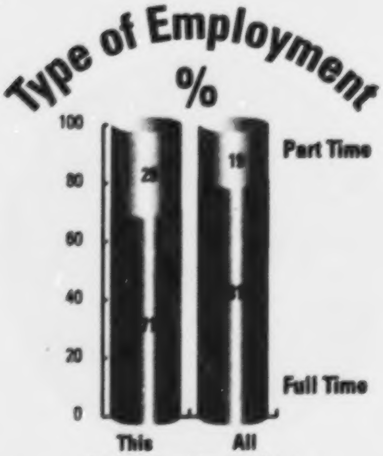
Unemployment Rate

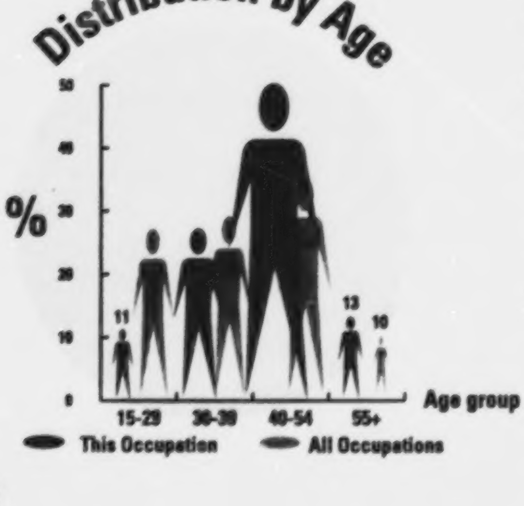


Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Psychologists







At Work

Psychologists work in clinics, correctional facilities, hospitals, rehabilitation centres, schools and school boards and universities. They may also be self-employed.

- They diagnose psychological and emotional disorders, help clients manage physical illnesses and disorders, counsel clients, provide therapy, research and apply theory relating to behaviour and mental processes, and teach.
- They work with psychological theory and principles regarding behaviour and mental processes such as learning, memory, perception and language development.
- They may specialize in clinical psychology, school psychology, industrial/organizational work or experimental research.
- They may also specialize in specific areas such as behavioural psychology, child psychology, clinical neuropsychology, health psychology, educational psychology, industrial psychology and sports psychology.

Education, Training & Experience

- Psychologists must have a post-graduate university degree in psychology and a provincial certificate of registration in all provinces and the Northwest Territories.
- They must have a doctoral degree in British Columbia and a master's or doctoral degree in all other provinces and the Northwest Territories.
- They usually must complete a period of supervised practical experience.
- They usually must complete a provincial written or oral examination.
- In Quebec, they must be members of the Ordre professionnel des psychologues du Québec.
- In some provinces, with additional training and experience, they may become specialized in a particular area.

In These Occupations...

- 13,000 people were employed in 1998, an increase of 66.0% from 1988. After employment gains of 47.4% from 1988 to 1993, employment growth slowed to 12.6% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 29% work part-time, well above the average of 19% for all occupations. The proportion of part-time workers in this

Check out the 'big picture' in "World of Work: Overviews and Trends"

occupation has increased significantly over the last ten years.

- 35% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed workers in this occupation has increased significantly over the last ten years.
- 62% of psychologists are women, well above the average of 45% for all occupations. The proportion of women in this occupation has increased significantly over the last ten years.
- the unemployment rate averaged 1.6% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for professional occupations and for occupations in the social science, education, government service and religion sectors.
- the average earnings are among the highest for professional occupations and for occupations in the social science, education, government service and religion sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since employment opportunities and earnings are both well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Growth will be limited in some areas as spending restraint continues in health and social services. The outlook may be better for clinical psychologists and for those willing to work in correctional centres.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in private health practices.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	39 900	58 300	68 000
Average	31 500	46 900	57 700
Lowest 20%	20 000	34 900	41 500

Age Group

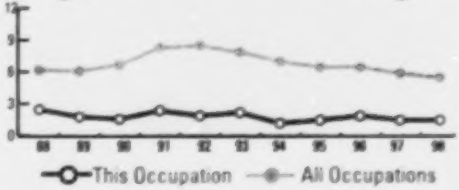
Overall Average for All Ages (15+)

This Occupation	**All Occupations**
52 700	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

Unemployment Rate



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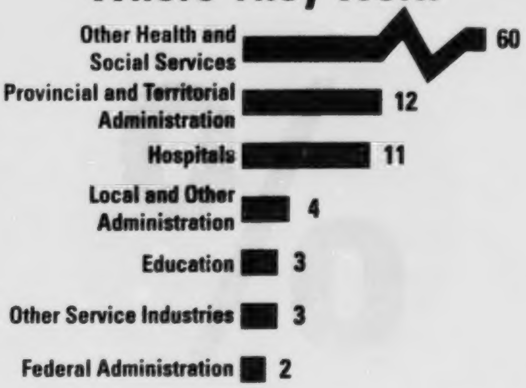
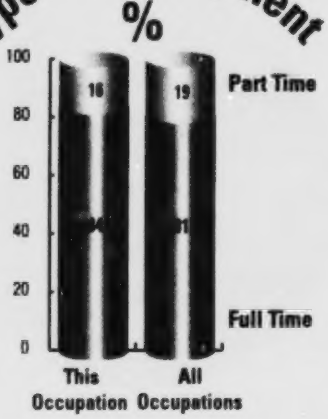
Social Workers

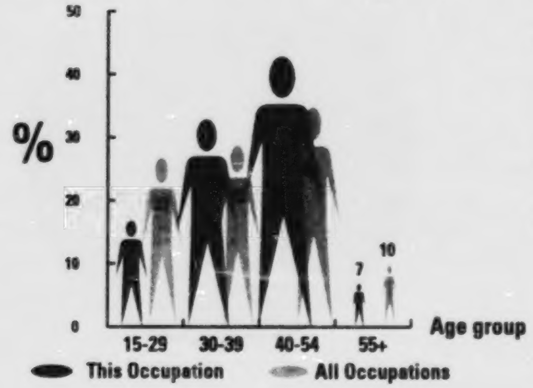
Where They Work



Type of Employment



Distribution by Age



At Work

Social workers work alone or in teams in hospitals, clinics, school boards, family services agencies, children's aid agencies, welfare administration agencies, correctional facilities, and federal and provincial departments. They may also work in private practice. Their duties may require them to:

- interview clients individually, in families or in groups to assess their situation and problems and determine the types of services they require;
- provide counsel and therapy to assist clients in developing skills to deal with and resolve their social and personal problems;
- plan programs of assistance for clients including referrals to agencies that provide financial help, legal aid, housing, medical treatment and other services;
- investigate cases of child abuse or neglect and take authorized protective action when necessary;
- act on behalf of client groups in the community and lobby for solutions to social problems; and
- develop and advise on social policy, conduct social research and assist in community development.

Education, Training & Experience

- Social workers must have a bachelor's degree in social work and usually require some supervised practical experience.
- Post-graduate education leading to a master's or doctoral degree is also available.
- Most recent entrants have an undergraduate university degree.
- They usually must complete a provincial written or oral examination.
- They usually must have membership in a provincial association of social workers.
- Social workers in Newfoundland, Prince Edward Island, New Brunswick, Nova Scotia, Quebec, Ontario and Saskatchewan must have a provincial certificate of registration.
- Most social work programs are accredited by the Canadian Association of Social Workers.
- In Quebec, they must be members of the Ordre professionnel des travailleurs sociaux du Québec.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 415
Part 2 Field of Study Cross-index: M890, U870, U890, U880, C210, C891

NOC 4152

In These Occupations...

- 36,000 persons were employed in 1998, an increase of 60.2% from 1988. After employment gains of 37.9% from 1988 to 1993, employment growth slowed to 16.2% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the last ten years, and 8.2% over the last five years.
- 16% of social workers are part-time, compared to an average of 19% for all occupations. The proportion of part-time workers in this occupation has increased significantly over the last 10 years.
- 3% of social workers are self-employed, well below the average of 17% for all occupations.
- 75% of social workers are women, well above the average of 45% for all occupations. The proportion of women in this occupation has increased significantly over the last 10 years.
- The unemployment rate averaged 2.5% from 1996 to 1998, compared to the national average of 6.0%.
- The average earnings are among the lowest for professional occupations and for occupations in the social science, education, government service and religion sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities are well above average and earnings are well below the average level for comparable occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Hospitals, federal and municipal governments and the educational system account for a large portion of the employment of social workers. Employment requirements for social workers will be adversely affected by reduced provincial and federal expenditures on health and social programs.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in health and social services.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	39 700	47 700	52 200
Average	32 400	38 900	42 200
Lowest 20%	25 800	30 900	32 700

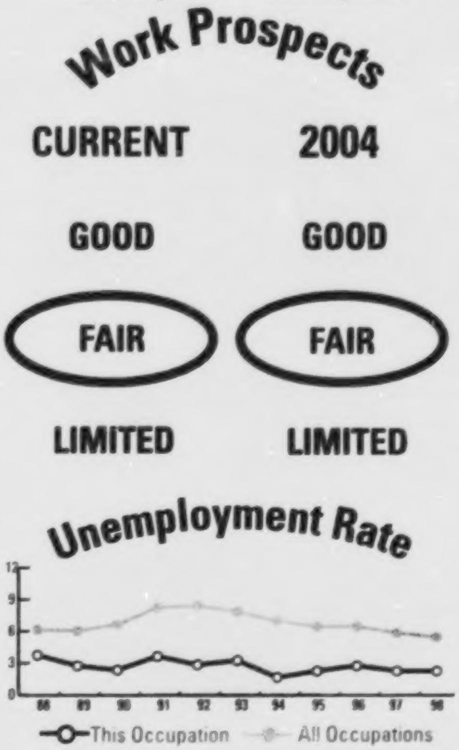
Overall Average for All Ages (15+)

This Occupation	All Occupations
39 800	37 400

Work Prospects

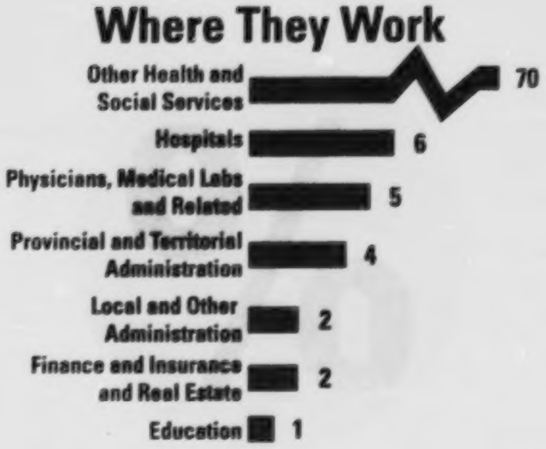
CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

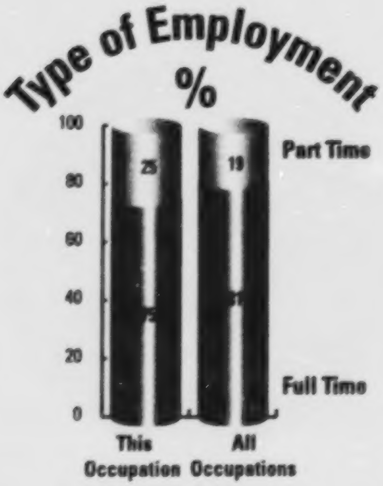
Unemployment Rate

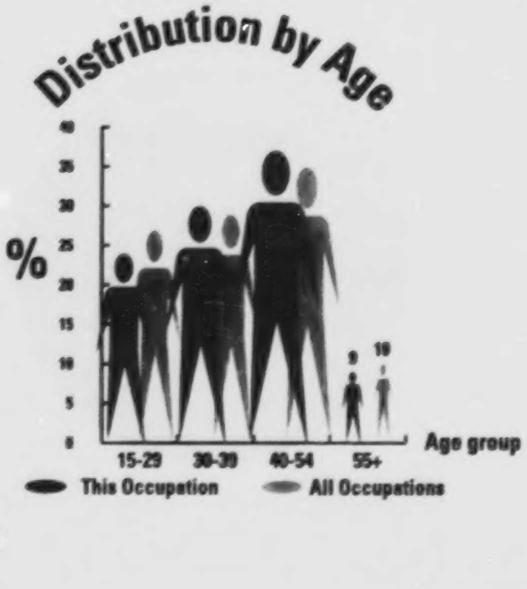


Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Family, Marriage and Other Related Counsellors







At Work

These counsellors work for social service agencies and hospitals or in private practice. Their duties may require them to:

- interview clients, prepare case histories and assess problems;
- develop and implement counselling and intervention programs to assist clients in determining goals;
- counsel clients and provide therapy;
- evaluate the effectiveness of counselling programs and clients' progress;
- provide public education and consultation to other professionals or groups regarding counselling services, issues and methods; and
- specialize in dealing with a specific client group such as injured workers, or with specific problems such as drug and alcohol addiction, marital difficulties and behavioural disorders.

This occupation also includes addictions counsellors, bereavement counsellors, sex therapists, rehabilitation counsellors and youth counsellors.

Education, Training & Experience

- These counsellors require a master's degree in counselling. In some instances, appropriate experience may serve as a substitute for a post-graduate degree. Most recent entrants have an undergraduate university degree or a community college diploma.
- They usually become specialized in a particular area through training and experience.
- With additional training and experience, they may progress to positions in social service management.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 415
Part 2 Field of Study Cross-index: U870, C210, U890, U880, C891

NOC 4153

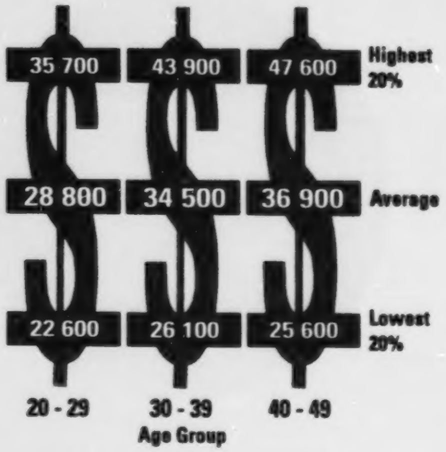
In These Occupations...

- 29,000 people were employed in 1998, an increase of 84.5% from 1988. After employment gains of 54.4% from 1988 to 1993, employment growth slowed to 19.5% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 25% work part-time, compared to an average of 19% for all occupations. The proportion of part-time workers in this occupation has increased significantly over the last ten years.
- 9% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in this occupation has increased significantly over the last ten years.
- 70% are women, well above the average of 45% for all occupations. The proportion of women in this occupation has increased significantly over the last ten years.
- the unemployment rate averaged 3.5% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the lowest for professional occupations and for occupations in the social science, education, government service and religion sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities and earnings are both at average levels for all occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Government spending restraints in social programs and health services will be an important factor limiting the growth of employment in this occupation. The best opportunities may be in the private sector.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in health and social services.

Earnings



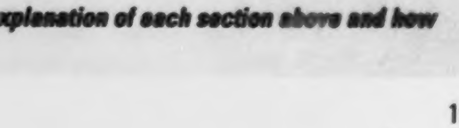
Overall Average for All Ages (15+)

This Occupation	All Occupations
34 100	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate



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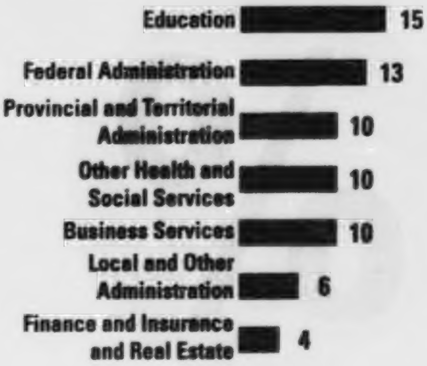
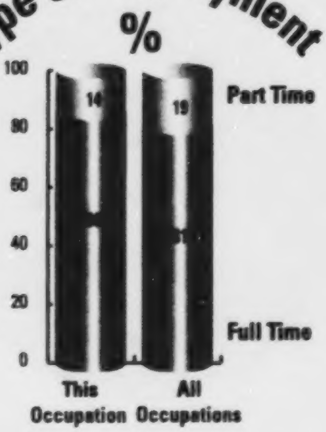
Policy and Program Officers, Researchers and Consultants

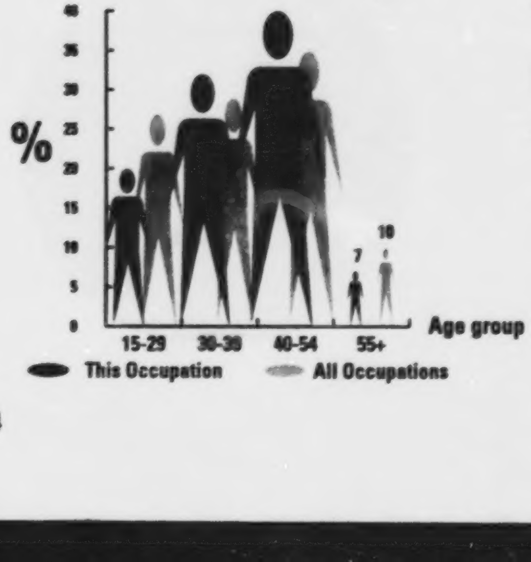
Where They Work



Type of Employment



Distribution by Age



At Work

These professionals work for government; educational and research institutions; business, professional and recreational organizations; advisory, consulting and marketing firms; non-governmental agencies; and other organizations.

- Professionals in natural and applied science, social, health, education, economic development and marketing areas conduct research, develop policies, provide advice and implement or administer various programs related to their field of work.
- Economists and economic policy researchers and analysts conduct research and develop models to provide for economic forecasting.
- Recreation and sports program supervisors and consultants oversee and administer programs and activities, provide consulting services and develop policies.
- Program officers in government administer and operate programs associated with institutions such as Parliament and activities such as international relations and elections.
- Social science professionals such as anthropologists, geographers, historians, political scientists, sociologists, linguists and archaeologists study, analyze and conduct research in their respective fields.
- Psychometricians administer and interpret psychological tests.

Education, Training & Experience

- People in this group usually require a college diploma or a university degree in their field of work. Most recent entrants have an undergraduate university degree or a master's degree.
- Some may require a master's or doctoral degree in their field of work.
- They may require several years' experience in their field of work.
- Foreign service officers must take competitive examinations.
- Recreation and sports program supervisors and consultants may require certificates in areas such as fitness and lifesaving.

In These Occupations...

- 74,000 people were employed in 1998, an increase of 48.9% from 1988. After employment gains of 26.9% from 1988 to 1993, employment growth slowed to 17.3% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 4160, 4161, 4163, 4165
Part 2 Field of Study Cross-index: [illegible], U240, [illegible], [illegible], [illegible], C[illegible], C210, U410, U420, [illegible], C041, [illegible], [illegible], [illegible], [illegible], [illegible], [illegible], U[illegible]

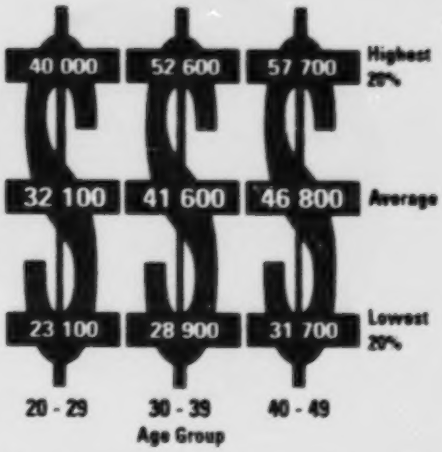
NOC 416

- 27% are health and social policy researchers; 26% are economic development officers; 13% are educational policy researchers; and 11% are recreation and sports program supervisors.
- 14% work part-time, compared to an average of 19% for all occupations.
- 16% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 56% are women, well above the average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 4.3% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for professional occupations and for occupations in the social science, education, government service and religion sectors.
- the average earnings are comparable to those for other professional occupations and for other occupations in the social science, education, government service and religion sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Government spending restraints may continue to slow employment growth or decrease employment levels in these occupations. The effects will vary among the different occupations in this group.
- Employment requirements for these occupations are expected to increase through 2004 across a broad range of industries, with much of the increase occurring in the business services, health and social services and education industries.

Earnings



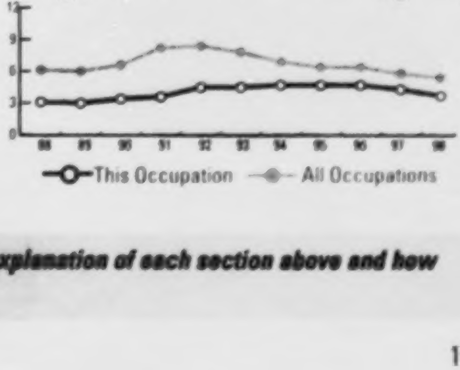
Overall Average for All Ages (15+)

42 700	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate



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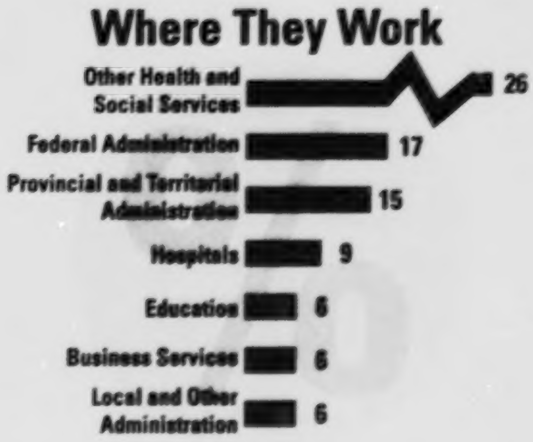
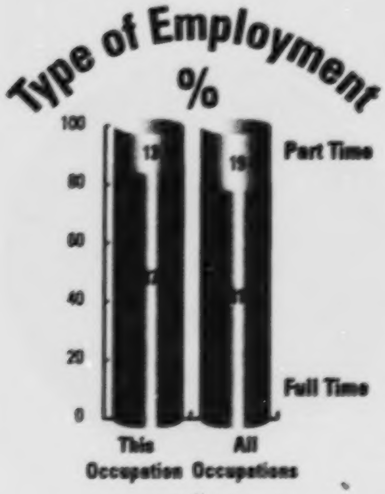
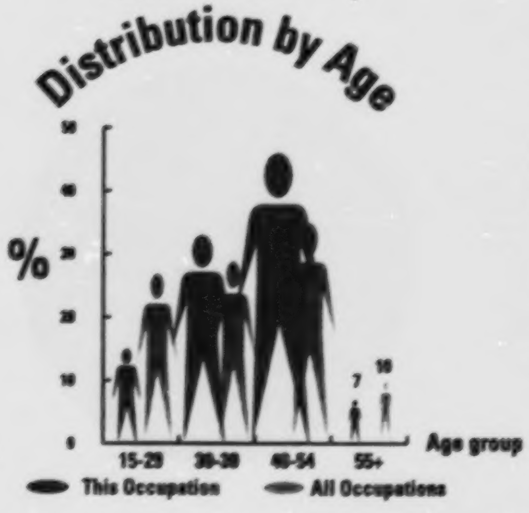
Health and Social Policy Researchers, Consultants and Program Officers







At Work

People in this occupation work in government departments and agencies, consulting firms, professional associations and non-governmental organizations.

- Social policy researchers develop social programs, legislation and proposals based on demographic, social and economic analyses.
- Home economists conduct research and advise consumers on food products, textiles and other consumer goods.
- Social survey researchers develop questionnaires, conduct surveys, analyze data and interpret statistics on social issues.
- Health policy researchers, consultants and program officers conduct research, produce reports and administer health care policies and programs.

This occupation also includes housing policy analysts and international aid and development project officers.

Education, Training & Experience

- People in this occupation usually require, at a minimum, a bachelor's degree or college diploma. Most recent entrants have an undergraduate university degree or a master's degree.
- People in social policy usually require a bachelor's degree or college diploma in social science or business administration. They may also need a master's degree in social science or business administration.
- People in health policy must have a bachelor's degree or college diploma in health science, public administration or hospital administration, or a bachelor's degree in social science. They may also need to complete a graduate degree and usually require several years' experience as health care professionals or community or social service workers.

In These Occupations...

- 20,000 people were employed in 1998, an increase of 70.9% from 1988. After employment gains of 34.6% from 1988 to 1993, employment growth slowed to 27.0% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 13% work part-time, compared to an average of 19% for all occupations.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 416
Part 2 Field of Study Cross-index: U870, U880, C891, M120, U120

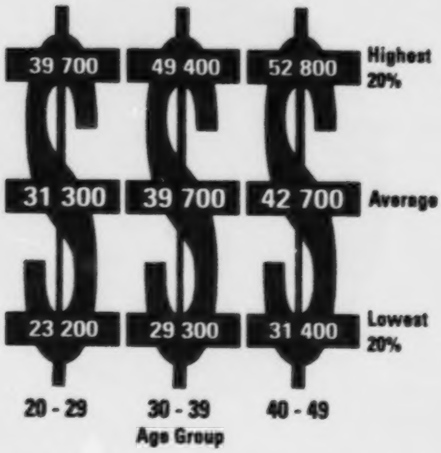
NOC 4160

- 10% are self-employed, compared to an average of 17% for all occupations.
- 68% are women, well above the average of 45% for all occupations. The proportion of women in this occupation has increased significantly over the last ten years.
- the unemployment rate averaged 4.5% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for professional occupations and for occupations in the social science, education, government service and religion sectors.
- the average earnings are among the lowest for professional occupations but are comparable to other occupations in the social science, education, government service and religion sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Health and social policy reforms at the federal and provincial levels could provide some employment opportunities in the near term. Over a longer period, government spending restraints may limit employment growth in this occupation.
- Employment requirements for this occupation are expected to increase across a broad range of occupations through 2004, with much of the increase in health and social services.

Earnings



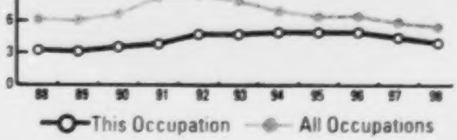
Overall Average for All Ages (15+)

40 400	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate



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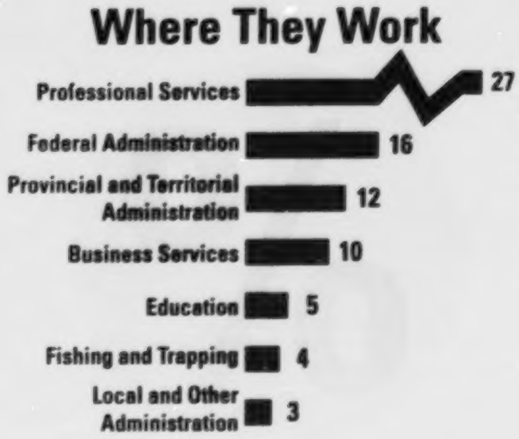
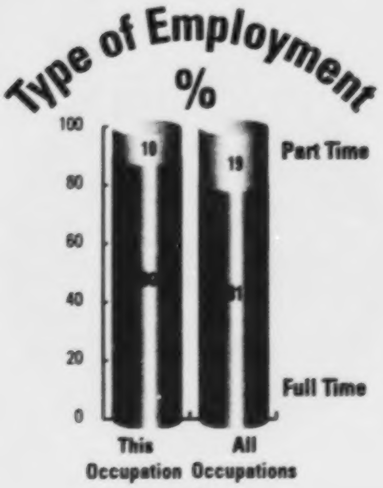
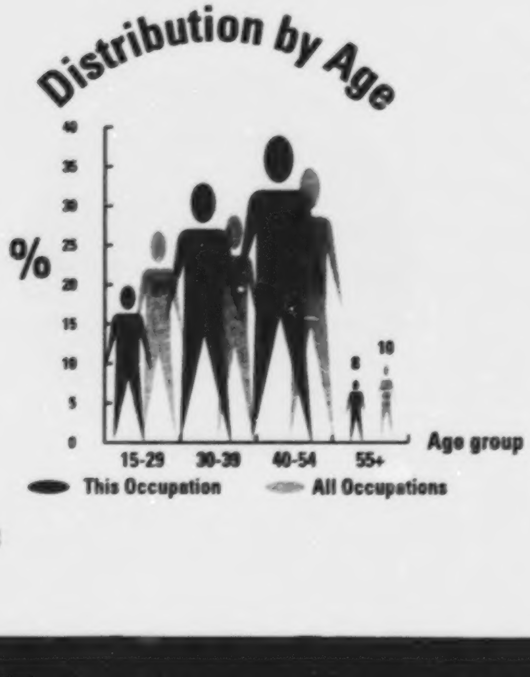
Natural and Applied Science Policy Researchers, Consultants and Program Officers







At Work

People in this occupation work for federal, provincial and municipal governments, private companies and advisory and consultant agencies. They may also be self-employed.

- Ergonomists conduct research and advise on interrelationships between persons, equipment and working or living environments to ensure products and work methods maximize safety, productivity and comfort.
- Occupational hygienists study physical and chemical hazards and stresses in the workplace. They suggest changes to work processes and provide information to workers on ways to reduce risk to specific occupational hazards.
- Science policy and program officers research and advise on policies and develop and administer programs related to transportation, communications, natural resources, agriculture, the environment, energy, land use and other scientific fields.

This occupation also includes fisheries analysts, industrial hygienists, scientific consultants, patent agents and transportation safety and transport program analysts.

Education, Training & Experience

- People in this occupation usually must have an undergraduate university degree or college diploma in a related scientific or technical discipline. Many recent entrants have an undergraduate university degree.
- They may require a master's degree in a related scientific discipline.
- Occupational hygienists may require certification by the Canadian Registration Board of Occupational Hygienists or, in Quebec, the Conseil d'accréditation en hygiène industrielle du Québec.
- With experience, people in this occupation may progress to managerial positions.

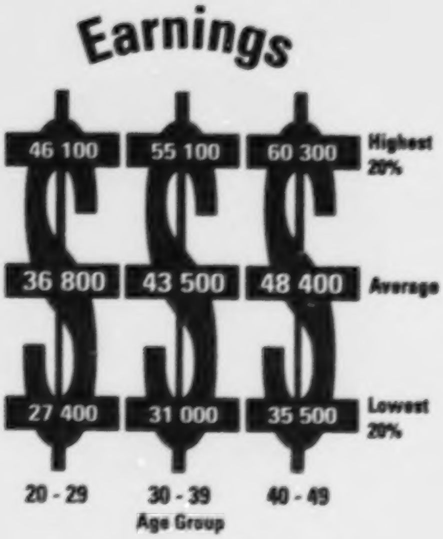
Check out the 'big picture' in "World of Work: Overviews and Trends"

In These Occupations...

- 7,000 people were employed in 1998, an increase of 67.6% from 1988. After employment gains of 47.3% from 1988 to 1993, employment growth slowed to 13.8% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 10% work part-time, compared to an average of 19% for all occupations.
- 20% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in this occupation has increased significantly over the last ten years.
- 33% are women, well below the average of 45% for all occupations. The proportion of women in this occupation has increased significantly over the last ten years.
- the unemployment rate averaged 3.3% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are comparable to those for other professional occupations and for other occupations in the social science, education, government service and religion sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities are average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Government spending decisions on research and regulatory enforcement, in areas such as health and the environment, may have an impact on the outlook for these occupations. Consequently, the best opportunities in this occupation are likely to be in the private sector - for example, in environmental consulting firms.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the professional services and business services industries.

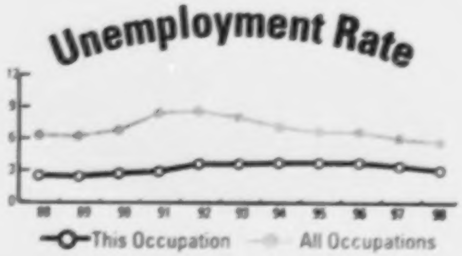


Overall Average for All Ages (15+)

45 600	37 400
This Occupation	All Occupations

Work Prospects

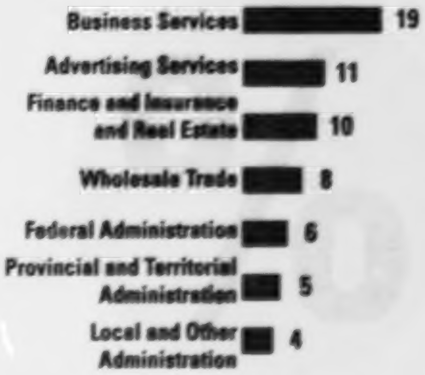
CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

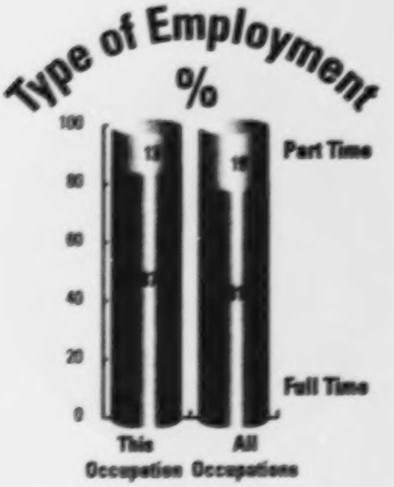


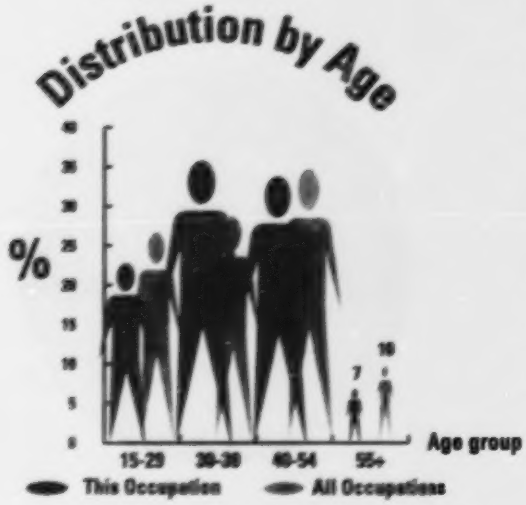
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Economic Development Officers and Marketing Researchers and Consultants

Where They Work







At Work

People in this occupation work for government agencies, marketing firms and business associations. They may also be self-employed. Their duties may require them to:

- develop policies and administer programs to promote business investment in urban and rural areas;
- conduct social and economic surveys to assess development potential and future trends;
- respond to questions from members of the business community concerning development opportunities;
- review development proposals and provide advice on procedures and requirements for government approval;
- conduct surveys and analyze data on the buying habits and preferences of consumers;
- conduct research on marketing for industrial and commercial products; and
- develop social and economic profiles of urban and rural areas to encourage investment.

This occupation also includes business, industrial, tourism and regional development officers, and tourism industry consultants.

Education, Training & Experience

- People in this occupation require a bachelor's degree in economics, commerce, business administration or public administration. Many recent entrants have an undergraduate university degree.
- With experience, they may progress to managerial positions.

In These Occupations...

- 20,000 people were employed in 1998, an increase of 59.8% from 1988. After employment gains of 35.4% from 1988 to 1993, employment growth slowed to 18.0% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 13% work part-time, compared to an average of 19% for all occupations.
- 24% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in this occupation has increased significantly over the last ten years.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 416
Part 2 Field of Study Cross-index: M120, U820, U120, C121, M820

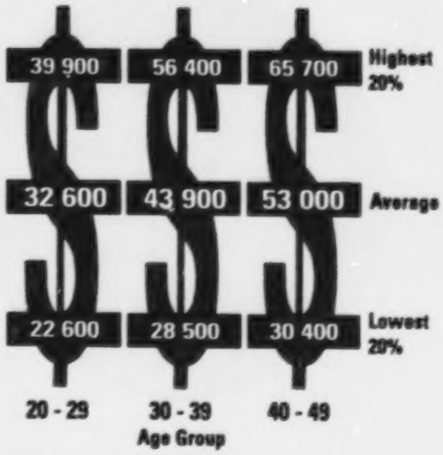
NOC 4163

- 50% are women, compared to an average of 45% for all occupations. The proportion of women in this occupation has increased significantly over the last ten years.
- the unemployment rate averaged 4.4% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for professional occupations and for occupations in the social science, education, government service and religion sectors.
- the average earnings are comparable to those for other professional occupations and for other occupations in the social science, education, government service and religion sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities are average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Free trade and the increasing use of information technology are likely to increase opportunities in this occupation; government spending restraints and restructuring in the financial sector will have the opposite effect. Marketing researchers and economic development officers with a strong understanding of other economies and of international trade and investment issues are likely to have the most success.
- Employment requirements for this occupation are expected to increase across a broad range of industries through 2004, with much of the increase in the business services industry.

Earnings



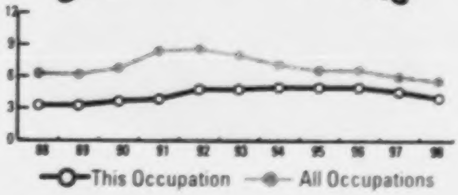
Overall Average for All Ages (15+)

44 100	37 400
This Occupation	All Occupations

Work Prospects

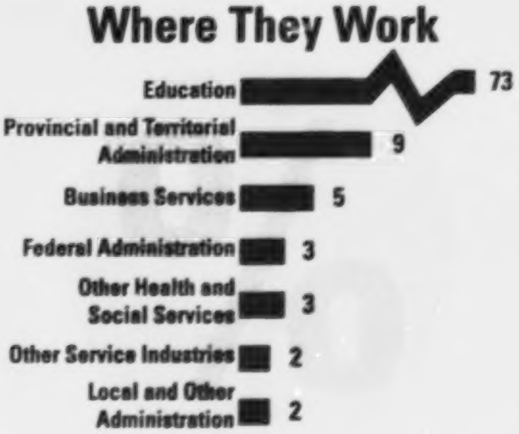
CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

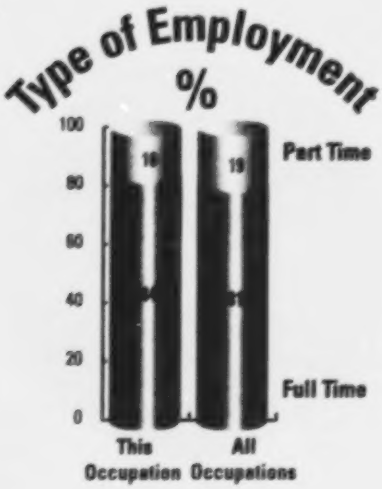
Unemployment Rate

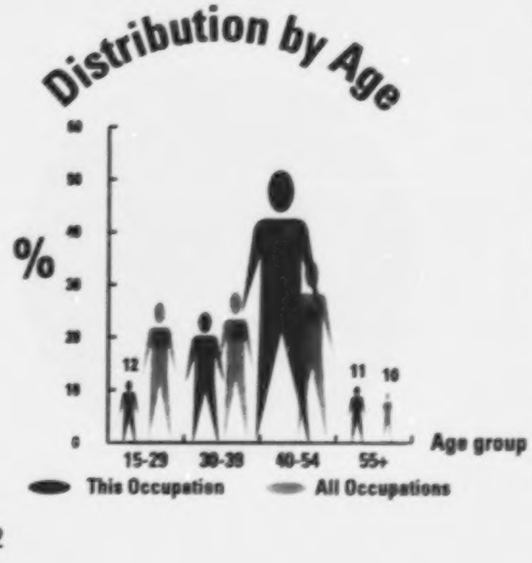


Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Education Policy Researchers, Consultants and Program Officers


Where They Work


Type of Employment


Distribution by Age

At Work

People in this occupation work in government departments, school boards and education research institutes. They may also be self-employed. Their duties may require them to:

- conduct research, produce reports and administer education policies and programs;
- evaluate curriculum programs and recommend improvements;
- develop the structure, content and objectives of new programs;
- conduct statistical analyses to determine the cost and effectiveness of education policies and programs;
- provide ongoing professional development training and consultative services to teachers; and
- develop teaching materials and other resources for program delivery.

This occupation also includes curriculum developers and planners, and education and special education coordinators.

Education, Training & Experience

- People in this occupation must have a bachelor's degree in education or in a discipline such as social science or business administration. Many recent entrants have an undergraduate university degree.
- They may require a master's degree in education.
- They usually need several years' experience as school teachers.
- They usually require a teacher's certificate in their province of employment.
- With experience, they may progress to managerial positions.

In These Occupations...

- 10,000 people were employed in 1998, an increase of 84.0% from 1988. After employment gains of 27.4% from 1988 to 1993, employment grew 44.3% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 16% work part-time, compared to an average of 19% for all occupations.
- 15% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers

Check out the 'big picture' in "World of Work: Overviews and Trends"

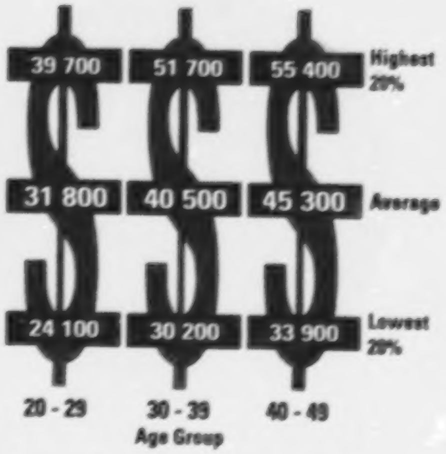
in this occupation has increased significantly over the last ten years.

- 64% are women, well above the average of 45% for all occupations. The proportion of women in this occupation has increased significantly over the last ten years.
- the unemployment rate averaged 3.7% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are comparable to those for other professional occupations and for other occupations in the social science, education, government service and religion sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities are average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Budgetary restraint by all levels of government will limit employment opportunities in this occupation, although educational restructuring may provide some openings in the short term. Private sector curriculum consultants may have the best opportunities.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in education.

Earnings



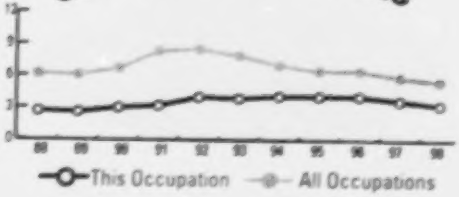
Overall Average for All Ages (15+)

44 600	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate



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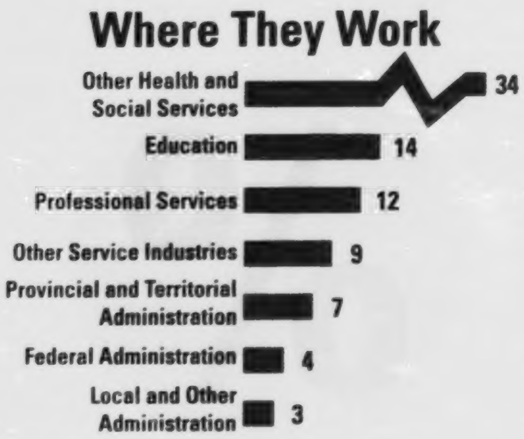
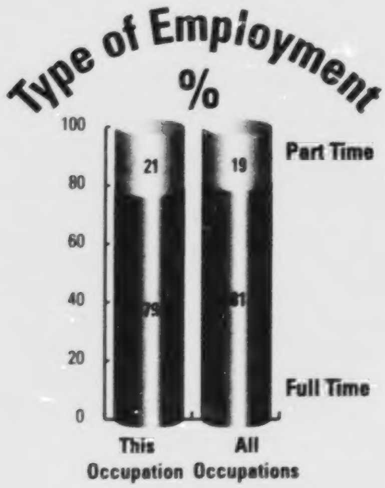
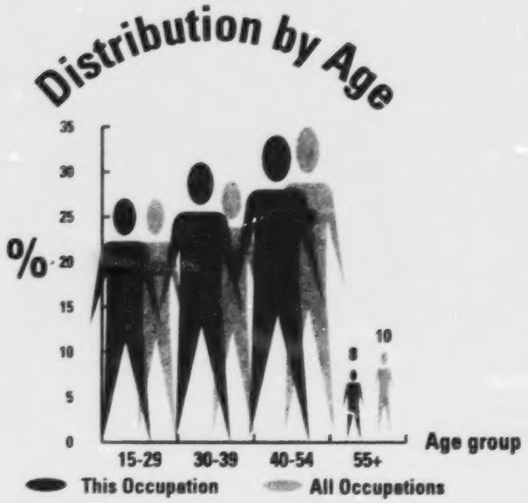
Paralegal, Social Services Workers and Occupations in Education and Religion







At Work

People in this group work for government, law firms, social service and private employment agencies, group homes, hospitals, prisons and correctional facilities, rehabilitation centres, nurseries and daycare centres, elementary and high schools, and places of worship.

- Paralegals and legal assistants prepare legal documents, maintain records and conduct research to assist lawyers.
- Trademark agents prepare trademark applications.
- Community and social service workers administer community services and social assistance programs.
- Employment counsellors provide assistance with employment searches and career planning.
- Instructors and teachers of persons with disabilities teach skills to children and adults with physical and developmental disabilities.
- Driving instructors teach vehicle driving skills.
- Driver's licence examiners conduct road tests to determine drivers' eligibility for licensing.
- Brothers, nuns and other religious workers provide support to ministers of religion and their religious communities.

Education, Training & Experience

- People in this group usually need a college diploma, a bachelor's degree or expertise in their area of work. Most recent entrants have an undergraduate university degree or a community college diploma.
- Employment counsellors may substitute a high school diploma and several years' experience related to counselling for post-secondary school education.
- Driving instructors must obtain a licence in their province of work.

In These Occupations...

- 180,000 people were employed in 1998, an increase of 56.1% from 1988. After employment gains of 31.5% from 1988 to 1993, employment growth slowed to 18.7% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 42% are community and social service workers; 17% are paralegals and related workers; 16% are instructors and

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 4211, 4212, 4215
Part 2 Field of Study Cross-index: C891, U670, U890, C210, U880, C841, T891, M880, U450, M890

NOC 421

teachers of disabled persons; and 10% are employment counsellors.

- 21% work part-time, compared to an average of 19% for all occupations.
- 12% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantlyover the last ten years.
- 78% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 4.2% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations but are among the lowest for occupations in the social science, education, government service and religion sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities and earnings both are at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Government spending restraint in social services is likely to limit employment opportunities in several of these occupations. The effects of spending restrictions will vary greatly among the occupations in this group.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the health and social services, professional services, education and business services industries.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	38 100	47 000	53 500
Average	30 200	37 500	43 200
Lowest 20%	22 400	27 900	30 200

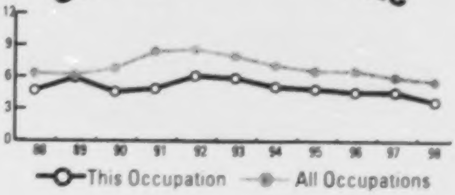
Overall Average for All Ages (15+)

This Occupation	All Occupations
39 700	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate



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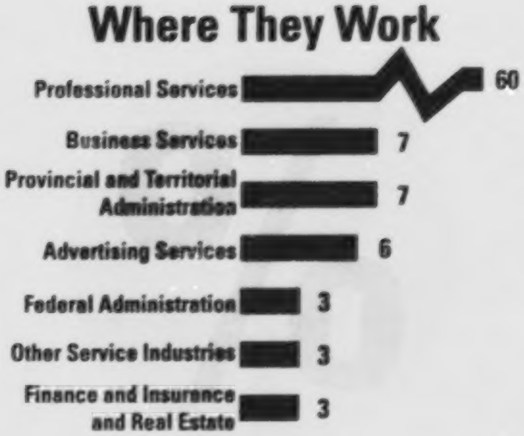
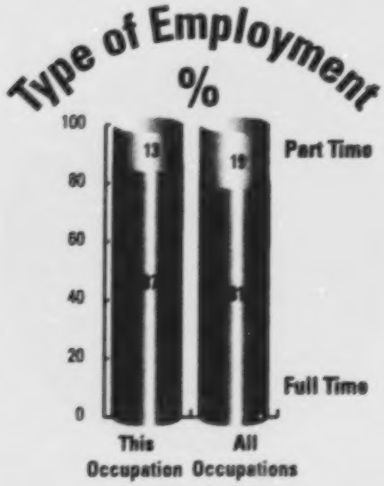
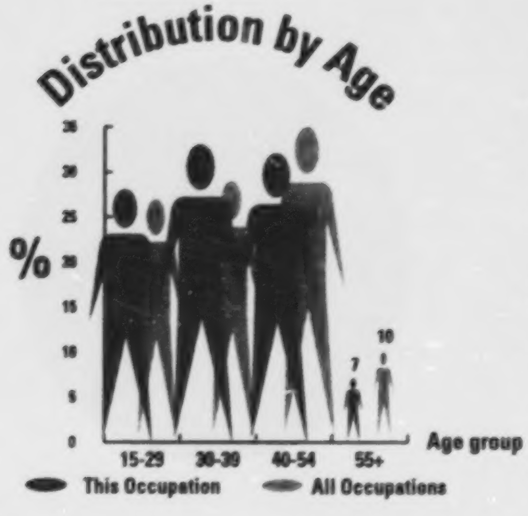
Paralegal and Related Occupations







At Work

People in this occupational group work in law firms and in legal departments throughout the public and private sectors. Trademark agents are also employed by trademark development and searching firms. Trademark agents and paralegals may also be self-employed.

- Paralegals, legal assistants and law clerks in law firms prepare legal documents, maintain records and files, and conduct research. They may also conduct interviews.
- Unsupervised paralegals provide certain legal services directly to the public for a fee, where allowed by provincial legislation. Notaries public prepare promissory notes, wills, mortgages and other legal documents. They may also administer oaths, take affidavits and depositions, and witness and certify the validity of signatures on documents.
- Trademark agents research and prepare trademark applications.
- Independent paralegals provide certain legal services as allowed by provincial legislation. They may represent clients in small claims court.

Education, Training & Experience

- People in this occupation must have a high school diploma. Most recent entrants have a community college diploma or an undergraduate university degree.
- Legal assistants and paralegals must complete a bachelor's degree in law or a college diploma in a legal assistant or law clerk program or in-house training.
- Notaries public must complete a one-year university notary public course and in-house training at their workplace. They also require a provincial licence. In British Columbia, they must be members of the Society of Notaries Public.
- Trademark agents must complete two years' in-house training and an examination conducted by the Patent and Trade Mark Institute of Canada. They must also register with the federal Trade-Marks Office.
- Independent paralegals usually obtain their education through experience and industry sponsored courses.

In These Occupations...

- 30,000 people were employed in 1998, an increase of 82.4% from 1988. After employment gains of 43.8% from 1988 to

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 421
Part 2 Field of Study Cross-index: C152, T152, U840, U120

NOC 4211

1993, employment growth slowed to 26.8% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.

- 13% work part-time, compared to an average of 19% for all occupations.
- 17% are self-employed, equal to the average for all occupations. The proportion of self-employed workers in this occupation has increased significantly over the last ten years.
- 87% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 2.1% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for technical, paraprofessional and skilled occupations and for occupations in the social science, education, government service and religion sectors.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations but are comparable to those for other occupations in the social science, education, government service and religion sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since employment opportunities and earnings are both well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Paralegals are likely to work increasingly with computerized filing systems and computerized legal databases. Opportunities for paralegals should be good, as competitive pressures force the substitution of paralegals for more highly paid lawyers.
- Most of the increase in employment requirements for this occupation through 2004 is expected to occur in the professional services industry.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	37 700	50 400	57 400
Average	31 400	41 300	48 300
Lowest 20%	23 200	30 300	33 000

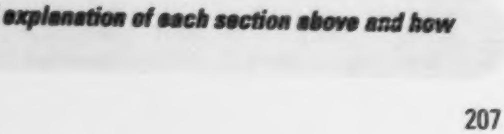
Overall Average for All Ages (15+)

This Occupation	All Occupations
43 700	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

Unemployment Rate



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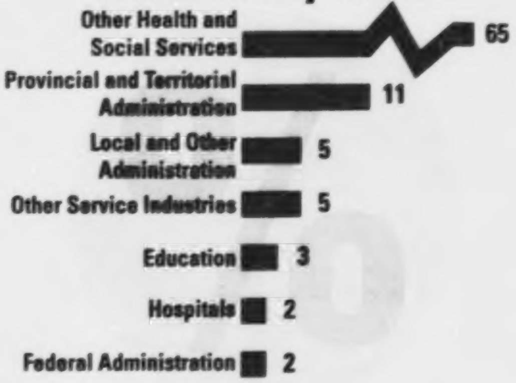
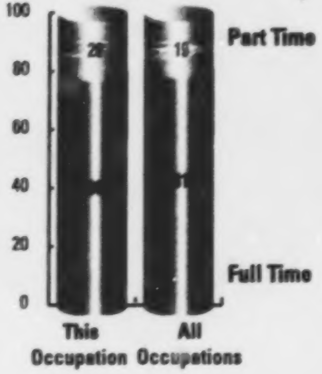
Community and Social Service Workers

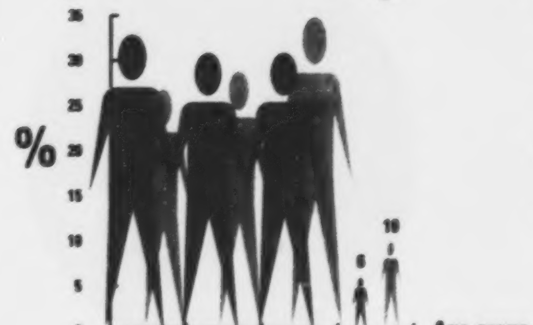
Where They Work



Type of Employment %



Distribution by Age



At Work

People in this occupation work in social service and government agencies, group homes, correctional facilities and other organizations. Their duties may require them to:

- interview clients to obtain case histories and prepare intake reports;
- assess and investigate clients' eligibility for social benefits, and advise clients regarding social assistance and pensions;
- refer clients to other social services;
- counsel and provide assistance to clients living in group homes and halfway houses, and supervise their activities;
- provide crisis intervention and emergency shelter services;
- implement programs such as life skills workshops, substance abuse treatment and youth services under the supervision of social workers or health care professionals; and
- assist in evaluating the effectiveness of treatment programs.

This occupation includes addictions workers, native outreach workers, youth workers, rehabilitation workers, family service workers, drop-in centre workers and welfare and compensation officers.

Education, Training & Experience

- People in this occupation usually complete a university or college program in social work, counselling or another social science discipline. Most recent entrants have an undergraduate university degree or a community college diploma.
- For some positions, previous experience in a social service environment as a volunteer or in a support capacity may replace formal education requirements.
- With additional training and experience, people in this occupation may progress to professional occupations in social services such as family and marriage counsellors, social workers and probation officers.

In These Occupations...

- 75,000 people were employed in 1998, an increase of 76.7% from 1988. After employment gains of 52.2% from 1988 to 1993, employment growth slowed to 16.1% from 1993 to

Check out the 'Big picture' in "World of Work: Overviews and Trends"

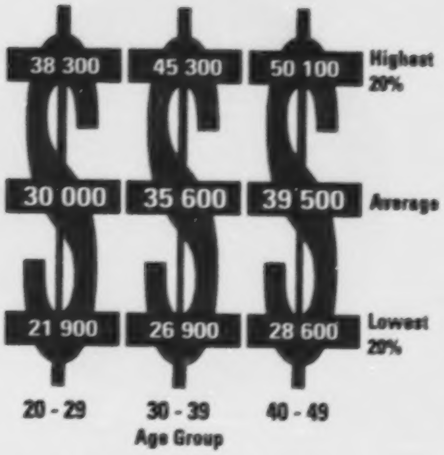
1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.

- 20% work part-time, compared to an average of 19% for all occupations.
- 6% are self-employed, well below the average of 17% for all occupations.
- 81% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 5.9% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for occupations in the social science, education, government service and religion sectors.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations but among the lowest for occupations in the social science, education, government service and religion sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities and earnings both are at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Continued government spending restraint in health and social services is likely to severely limit employment prospects in this occupation. In the longer run, an aging population will increase demand for the services of these workers. The best job opportunities may be in the private sector.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in health and social services.

Earnings



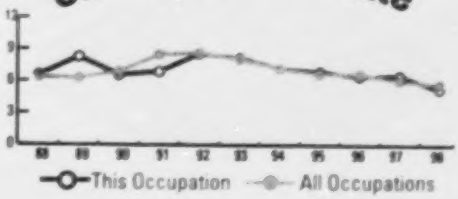
Overall Average for All Ages (15+)

37 200	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

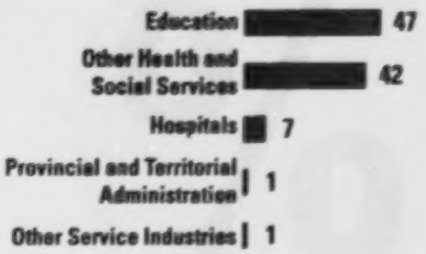
Unemployment Rate

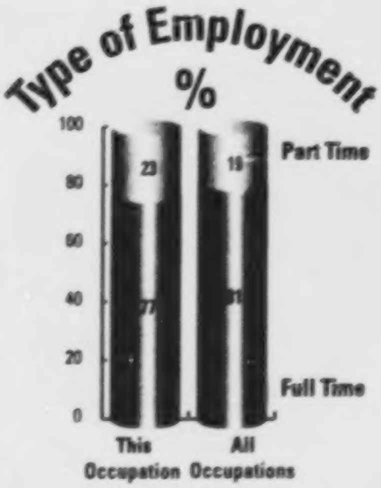


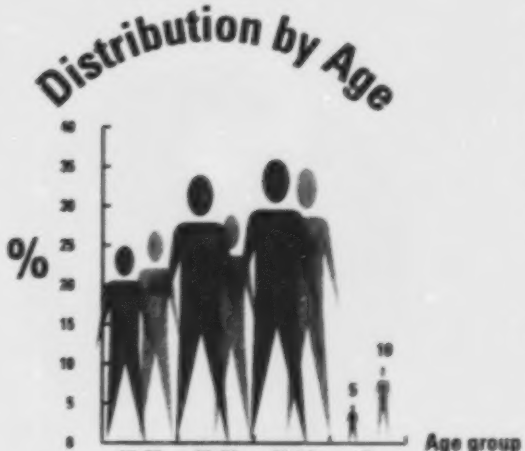
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Instructors and Teachers of Disabled Persons

Where They Work







At Work

People in this occupation work in rehabilitation centres and elementary and high schools. Their duties may require them to:

- instruct students who are blind and visually impaired in reading and writing braille and in the use of special equipment;
- instruct students who are deaf and hearing-impaired in lip-reading, finger spelling and sign language;
- instruct students who are hearing-impaired in the formation and development of sounds for speech using hearing aids and other devices;
- instruct persons with physical disabilities and their families in the use of rehabilitative techniques, prosthetic devices, wheelchairs and other equipment; and
- assist individuals with physical or developmental disabilities to develop life skills.

Education, Training & Experience

- People in this occupation usually require a bachelor's degree in education or a related field of work such as psychology or social work. In some instances, people with a community college diploma and appropriate experience may work in this occupation. Most recent entrants have an undergraduate university degree or a community college diploma.
- They must complete an appropriate training program in rehabilitation or special education.
- Instructors of the blind require certification by the Canadian National Institute for the Blind.
- Teachers who work in public schools require provincial teaching certificates.

In These Occupations...

- 30,000 people were employed in 1998, an increase of 18.5% from 1988. However, after rising 22.2% over the 1988 to 1993 period, employment decreased 3.0% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 23% work part-time, compared to an average of 19% for all occupations.

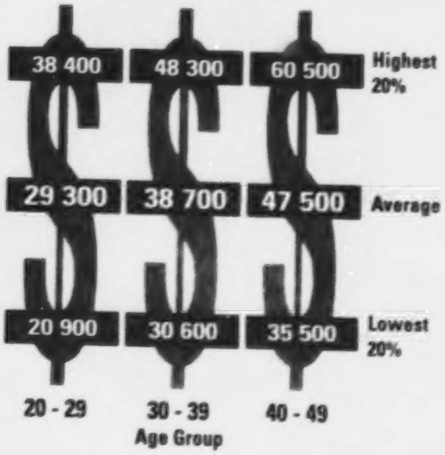
Check out the 'big picture' in "World of Work: Overviews and Trends"

- 3% are self-employed, well below the average of 17% for all occupations.
- 84% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 3.9% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations but are comparable to those for other occupations in the social science, education, government service and religion sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities are average, although earnings are above the average level for comparable occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- There is increasing concern in society for persons with disabilities, but public funds are dwindling in a number of areas. Government spending restraints may limit opportunities in this occupation, perhaps to a lesser extent than for other social service workers.
- Almost all of the increase in employment requirements through 2004 for this occupation is expected to occur in health and social services and education.

Earnings



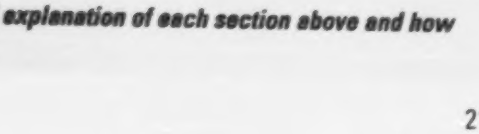
Overall Average for All Ages (15+)

42 300	37 400
This Occupation	All Occupations

Work Prospects

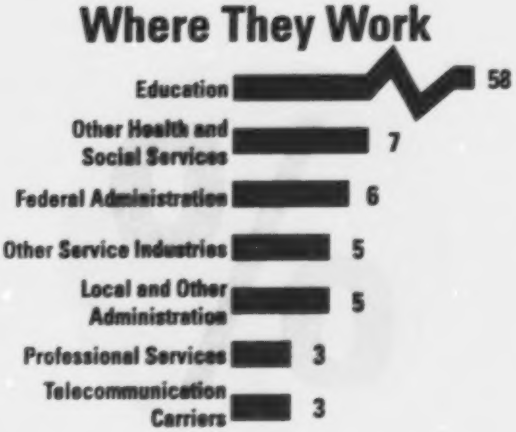
CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate

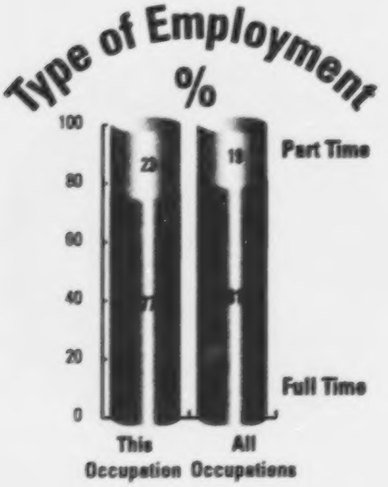


Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

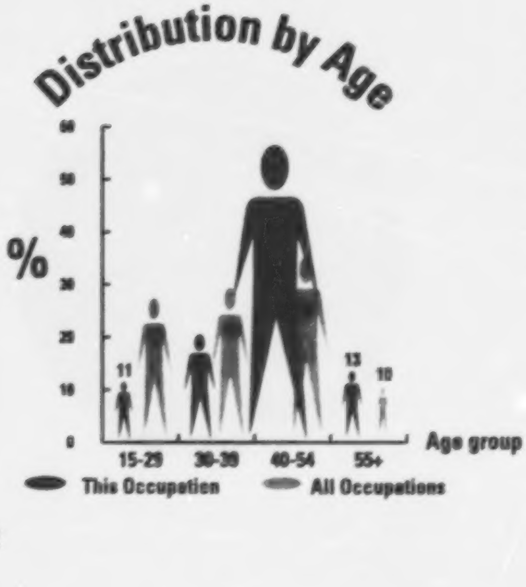
Librarians, Archivists, Conservators and Curators



Where They Work



Type of Employment



Distribution by Age

At Work

People in this group work in schools and for government, libraries, archives, museums, art galleries and other organizations.

- Librarians develop, organize and maintain library collections and provide advisory services for users. They perform manual and on-line reference searches, arrange inter-library loans and supervise technicians, assistants and clerks. They may specialize in particular collections or work in information management areas such as maintaining Web sites or providing training in Internet resources.
- Archivists acquire, research and store historical documents, photographs, maps, audio-visual and other materials. They ensure the preservation and storage of these materials and develop classification systems so that users can gain access to them.
- Conservators restore and conserve paintings, photographs, sculptures, furniture, pottery and other works of art and antiquity. They provide consultation to museums, art galleries and individuals, and supervise conservation technicians and other museum technicians. They may specialize in a particular conservation field.
- Curators recommend the acquisition of paintings, photographs, sculptures, documents and other museum and gallery artifacts. They research the origin and history of artifacts, develop the storyline and theme of displays and exhibitions, and supervise curatorial assistants and other museum technicians. They may specialize in particular collections.

Education, Training & Experience

- People in this group usually must have a university degree. Many recent entrants have an undergraduate university degree.
- Librarians need a master's degree in library science.
- Archivists usually require a master's degree in archival studies, library science or history.
- Conservators need a master's degree in art conservation or a college diploma in conservation technology and several years' experience in conservation work.
- Curators must have a bachelor's or master's degree in museology, art history or a field related to their area of work.

Check out the 'big picture' in "World of Work: Overviews and Trends"

In These Occupations...

- 18,000 people were employed in 1998, a decrease of 1.1% from 1988. After rising 12.7% over the 1988 to 1993 period, employment decreased 12.2% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 77% are librarians; 12% are conservators and curators; and 11% are archivists.
- 23% work part-time, compared to an average of 19% for all occupations.
- 2% are self-employed, well below the average of 17% for all occupations.
- 80% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 3.5% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations in the art, culture, recreation and sport sectors.
- the average earnings are among the lowest for professional occupations but are comparable to those for other occupations in the art, culture, recreation and sport sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, the outlook is expected to improve to "Good", as a very high retirement rate in these occupations is expected to increase the number of job openings more rapidly than the number of qualified job seekers.
- Government spending restraint in the cultural sector will decrease employment opportunities in public libraries and galleries. Opportunities in the private sector include maintaining corporate archives and corporate memory systems and using the Internet for information searches.
- The increasing availability of computerized reference material, both on the Internet and on compact disks, will transform the work of librarians. Growing use of computerized information storage will mean that archivists must organize information retrieval systems that allow easy and reliable access to stored data.
- Most of the increase in employment requirements through 2004 for these occupations will occur in education.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	35 739	46 258	53 275
Average	28 741	36 880	43 804
Lowest 20%	22 674	28 225	31 405

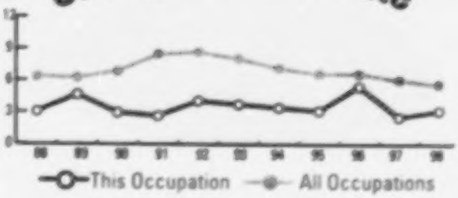
Overall Average for All Ages (15+)

This Occupation	All Occupations
40 879	37 400

Work Prospects

CURRENT	2004
GOOD	[✓ GOOD]
[✓ FAIR]	FAIR
LIMITED	LIMITED

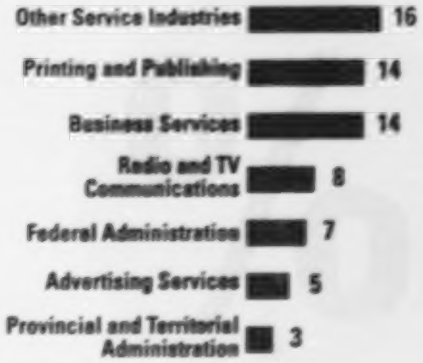
Unemployment Rate

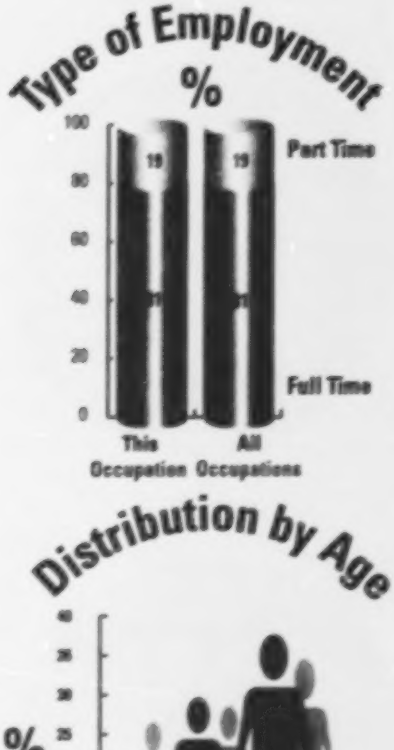


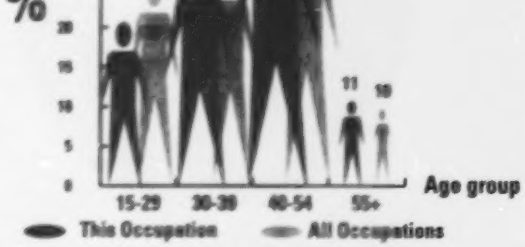
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Writing, Translating and Public Relations Professionals

Where They Work







At Work

People in this group work for governments; advertising agencies; large corporations; private consulting firms; magazines, journals, newspapers and other publishers; radio and television networks and stations; social agencies; private translation and interpreting agencies; and international and other organizations. They may also be self-employed.

- Writers research and write books, scripts, plays, essays, speeches, manuals, specifications and other non-journalistic articles.
- Editors review, evaluate and edit manuscripts, articles, news reports and other material for publication and broadcast, and co-ordinate the activities of staff.
- Journalists research, investigate, interpret and communicate news and public affairs through newspapers, television, radio and other media.
- Specialists in public relations and communications develop and implement communications strategies and information programs, publicize activities and events, and maintain media relations on behalf of clients.
- Translators adapt written material from one language to another.
- Interpreters translate oral communication from one language to another.
- Sign-language interpreters translate sign language to spoken language and vice versa.

Education, Training & Experience

- People in this group usually require a college diploma or a university degree in their area of work. Many recent entrants have an undergraduate university degree.
- Translators and terminologists usually require an undergraduate university degree; interpreters usually need a postgraduate degree. They may require certificates and membership in their professional organization.
- Translators and interpreters working for international organizations usually require fluency in three languages.

In These Occupations...

- 78,000 people were employed in 1998, an increase of 32.0% from 1988. After employment gains of 17.1% from 1988 to 1993, employment growth slowed to 12.7% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 5121, 5122, 5124
Part 2 Field of Study Cross-index: C410, U120, U410, U420, M404, U800, U402, U403, U404, M860, M402, M403, M420

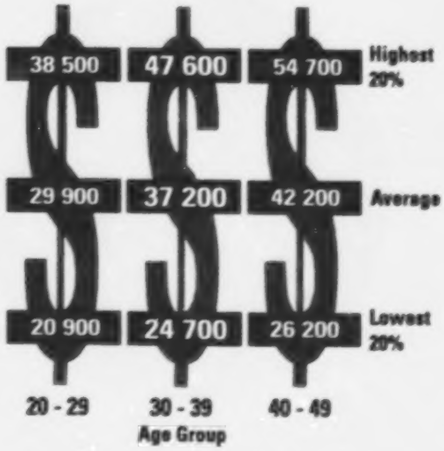
NOC 512

- 35% work in public relations and communications; 24% are writers; 16% are journalists; 15% are translators, terminologists and interpreters; and 10% are editors.
- 19% work part-time, equal to the average for all occupations. The proportion of part-time workers in these occupations has increased significantly over the last ten years.
- 35% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 56% are women, well above the average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 4.7% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for professional occupations.
- the average earnings are among the lowest for professional occupations but are comparable to those for other occupations in the art, culture, recreation and sport sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- The continuing growth of niche publications and the development of Internet publishing will create opportunities in writing, journalism and editing occupations.
- The Canadian Translation Industry Sectoral Committee expects strong growth in employment opportunities in translation in the near future.
- Contracting-out of government work will increase opportunities in the private sector for translators. Translators between Spanish and English or French and between Asian languages and English or French are likely to have the best opportunities.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the business services and printing and publishing industries.

Earnings



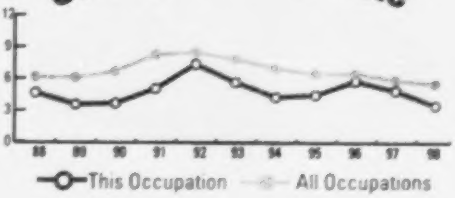
Overall Average for All Ages (15+)

39 500	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate



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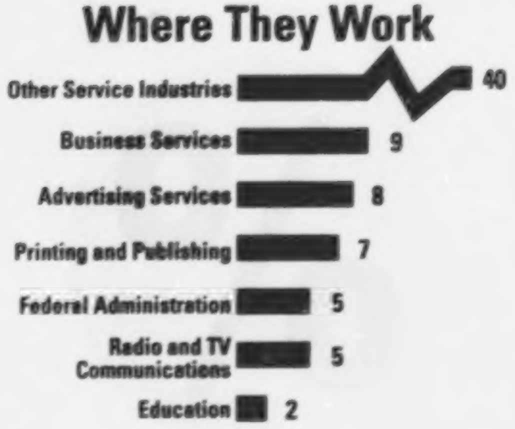
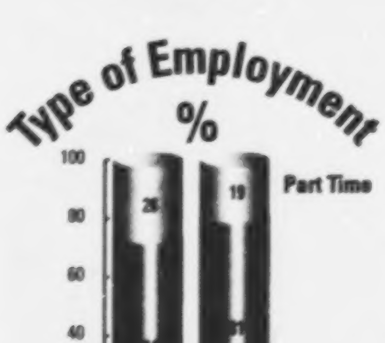
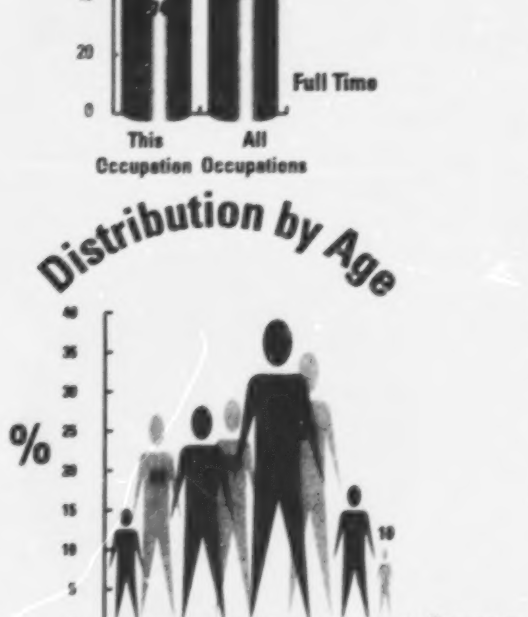
Writers







At Work

People in this occupation work in advertising agencies, governments, large corporations, private consulting firms, publishing firms and other organizations.

- Self-employed writers work on a free-lance basis.
- Creative writers such as novelists, playwrights, script writers, poets and humorists conceive and write material for publication or presentation. They may conduct research for factual content and obtain other necessary information.
- Technical and specifications writers analyze material such as specifications, notes and drawings and write manuals, user guides and other documents to explain the installation, operation and maintenance of electronic, mechanical and other equipment.
- Copywriters study and determine selling features of products and services and write text for advertisements and commercials.
- Writers may specialize in a particular subject or type of writing.

This occupation also includes television writers, essayists, speech writers and scientific writers.

Education, Training & Experience

- People in this occupation have different educational requirements, depending on their specialization. Most recent entrants have a university degree; others have some other post-secondary qualification.
- Technical writers usually require a university degree in an area of specialization such as computer science or engineering.
- Copywriters usually require a university degree or college diploma in English, French, marketing or another discipline.
- Creative writers may take creative writing programs offered by universities and colleges.
- Most people in this occupation require talent and ability, as demonstrated by a portfolio of work, in order to be hired.

In These Occupations...

- 19,000 people were employed in 1998, an increase of 37.1% from 1988. Most of the growth occurred from 1993 to 1998, when employment increased 28.0%. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 26% work part-time, compared to an average of 19% for all occupations. The proportion of part-time workers in this occupation has increased significantly over the last ten years.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 512
Part 2 Field of Study Cross-index: U402, U420, C410, U860

NOC 5121

- 72% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed workers in this occupation has increased significantly over the last ten years.
- 51% are women, compared to an average of 45% for all occupations. The proportion of women in this occupation has increased significantly over the last ten years.
- the unemployment rate averaged 2.3% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations in the art, culture, recreation and sport sectors.
- the average earnings are among the lowest for professional occupations but are comparable to those for other occupations in the art, culture, recreation and sport sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since employment opportunities are well above average, although earnings are at the average level.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Computers are transforming writers' work in several ways. First, computer programming creates a strong demand for technical writers familiar with programming. Second, use of the Internet and computerized reference materials has changed writers' research methods drastically. Third, modems allow rapid transfer of material between writer, editor and publisher.
- Government spending restrictions have decreased openings for writers in government. Contracting-out of government work and the proliferation of niche publications (including Internet publications) are favourable trends for self-employed writers.
- Employment requirements for this occupation are expected to increase across a broad range of industries through 2004, with much of the increase in the business services and other services industries.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	37 300	44 100	52 100
Average	29 700	35 100	40 500
Lowest 20%	20 300	20 700	15 000

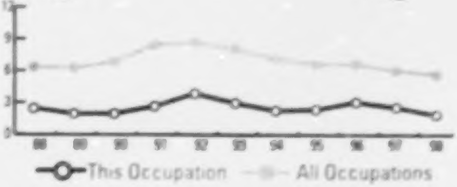
Overall Average for All Ages (15+)

This Occupation	All Occupations
38 300	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

Unemployment Rate



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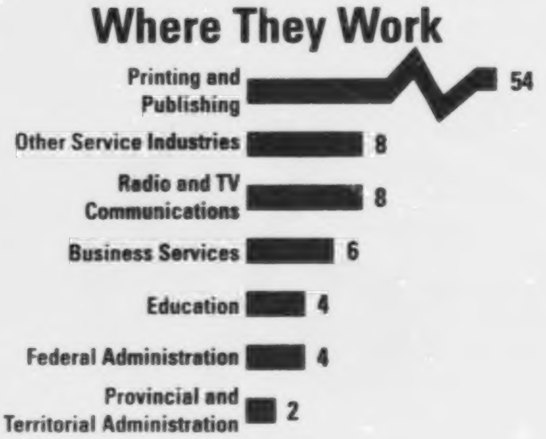
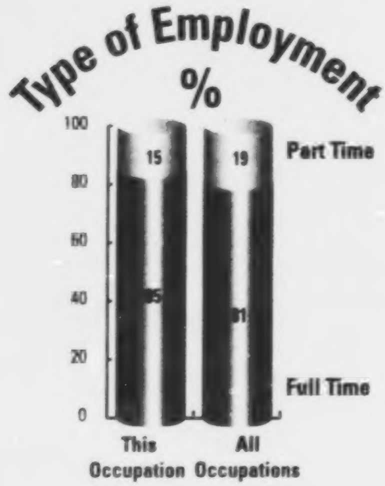
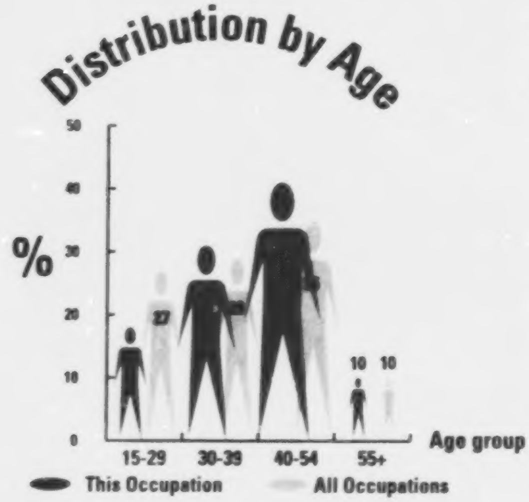
Editors







At Work

Editors work for publishing firms, magazines, journals, newspapers, and radio and television networks and stations, and for companies and government departments that produce publications. They may also be self-employed. Their duties may require them to:

- evaluate manuscripts, articles, news copy and wire service dispatches for publication or broadcast;
- recommend or make changes in content, style and organization of submitted copy;
- correct errors in spelling, grammar and syntax, and shorten or lengthen copy as required;
- confer with authors, staff writers, reporters and others regarding revisions to copy;
- plan layout or format of copy according to printed space or broadcast time;
- plan and coordinate activities of staff and ensure deadlines are met;
- plan coverage of upcoming events and assign work;
- negotiate royalties and payments to authors and free-lance writers; and
- specialize in particular subjects such as sports or in particular types of publications such as newspapers.

This occupation also includes advertising editors, art editors, news editors, photo editors and production editors.

Education, Training & Experience

- Editors usually require a bachelor's degree in journalism, English, French or a related discipline. Many recent entrants have an undergraduate university degree.
- They usually must have several years' experience in journalism, writing, publishing or a related field.
- With experience, they may progress to management positions such as editor-in-chief or managing editor.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 512
Part 2 Field of Study Cross-index: U402, C410, U860

NOC 5122

In These Occupations...

- 8,000 people were employed in 1998, a decrease of 0.1% from 1988. After rising 6.2% over the 1988 to 1993 period, employment decreased 6.0% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 15% work part-time, compared to an average of 19% for all occupations.
- 22% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in this occupation has increased significantly over the last ten years.
- 52% are women, compared to an average of 45% for all occupations. The proportion of women in this occupation has increased significantly over the last ten years.
- the unemployment rate averaged 4.8% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for professional occupations.
- the average earnings are among the lowest for professional occupations but are comparable to those for other occupations in the art, culture, recreation and sport sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Technological change has increased the need for editors with skills in particular technical areas - for example, computer program manuals. Contracting-out in both government and the private sector may mean that more and more editors work on a free-lance basis. This trend is reinforced by the availability of modems to transfer between material between writer, editor and publisher.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the printing and publishing industry.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	34 900	47 400	58 300
Average	28 300	36 700	43 100
Lowest 20%	23 700	25 300	29 500

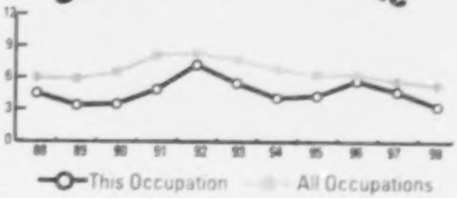
Overall Average for All Ages (15+)

This Occupation	All Occupations
39 700	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate



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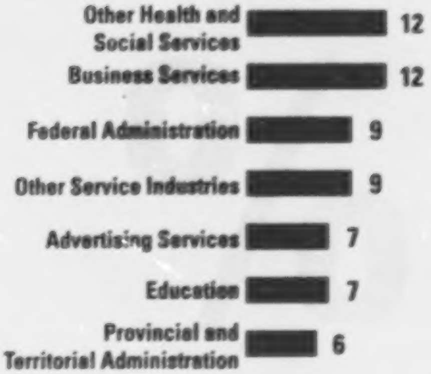
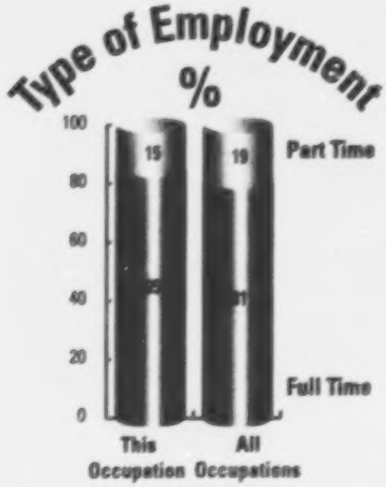
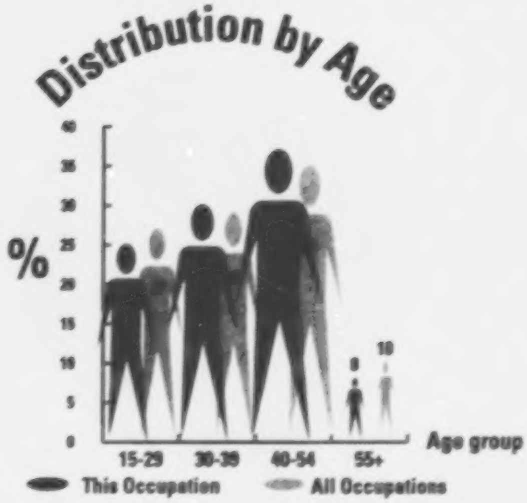
Professional Occupations in Public Relations and Communications

Where They Work







At Work

People in this occupation work for consulting firms, corporations, associations, government, social agencies and other organizations. They may also be self-employed. Their duties may require them to:

- develop, implement and evaluate communications strategies and programs to inform clients, employees and the public of initiatives and policies of businesses, government and other organizations;
- gather, research and edit material for in-house and public audiences;
- prepare or oversee the preparation of reports, briefs, bibliographies, speeches, presentations and press releases;
- develop and organize workshops, meetings, ceremonies and other events for publicity, fundraising and other information purposes;
- prepare and deliver educational and publicity programs to increase awareness of museums, galleries and other tourist attractions;
- initiate and maintain contact with the media;
- arrange interviews and news conferences; and
- assist in the preparation of brochures, reports, newsletters and other material.

This occupation also includes fundraising consultants, media relations officers, museum educators, press secretaries and publicists.

Education, Training & Experience

- People in this occupation usually require a university degree or college diploma in public relations, communications, journalism or a discipline related to a particular subject. Most recent entrants have an undergraduate university degree.
- With additional training and experience, they may progress to managerial positions in public relations and communications.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 512
Part 2 Field of Study Cross-index: M120, U120, C140, U880, U860

NOC 5124

In These Occupations...

- 27,000 people were employed in 1998, an increase of 48.7% from 1988. After employment gains of 32.9% from 1988 to 1993, employment growth slowed to 11.9% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 15% work part-time, compared to an average of 19% for all occupations.
- 14% are self-employed, compared to an average of 17% for all occupations.
- 62% are women, well above the average of 45% for all occupations. The proportion of women in this occupation has increased significantly over the last ten years.
- the unemployment rate averaged 6.3% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for professional occupations.
- the average earnings are among the lowest for professional occupations but are comparable to those for other occupations in the art, culture, recreation and sport sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Corporations and government may tend to contract out much of the routine public relations work in the future. This will be made easier by computer and telecommunications technologies which allow free lancers to work off-site.
- Employment requirements for this occupation are expected to increase across a broad range of industries through 2004, with much of the increase in the business services industry.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	39 700	47 700	54 400
Average	30 700	38 900	43 500
Lowest 20%	22 400	27 000	27 800

Age Group

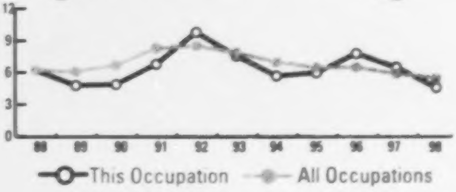
Overall Average for All Ages (15+)

This Occupation	All Occupations
40 500	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate



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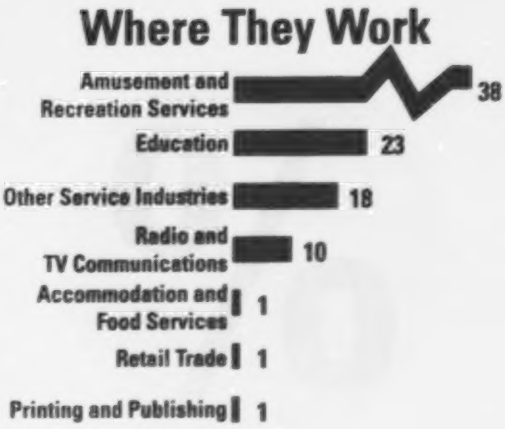
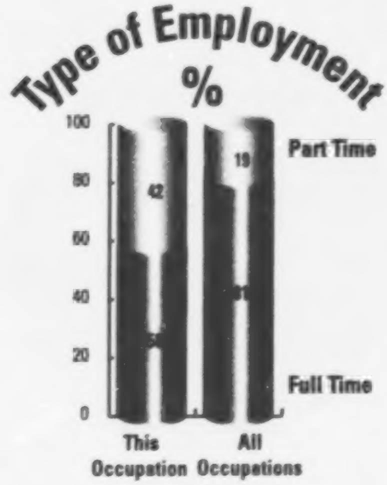
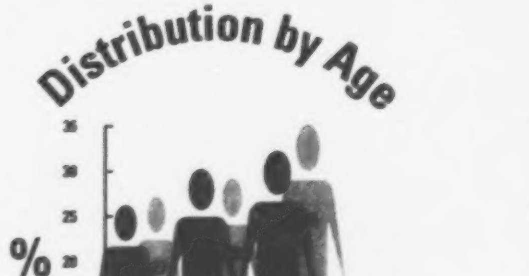
Creative and Performing Artists







At Work

People in this group work for film production, radio and television companies and stations; broadcasting departments; sound recording studios; record production, ballet and dance companies; symphony orchestras; bands; choirs; night clubs; dance academies; and private acting and dance schools. Many are self-employed.

- Film, television and radio producers manage the production of motion pictures, television shows and radio programs.
- Directors interpret scripts, select casts and direct performers and other aspects of productions.
- Record producers plan and coordinate musical recordings.
- Directors of photography plan and coordinate the photography of motion pictures.
- Conductors select and interpret musical works, and lead bands, orchestras and choirs.
- Arrangers adapt and modify musical compositions to convey desired themes.
- Musicians play one or more instruments.
- Singers sing musical arrangements.
- Actors perform roles in motion picture, television and radio productions.
- Painters, sculptors and other visual artists create original paintings, drawings, sculptures, engravings and other art works.

Education, Training & Experience

- People in this group usually have a university degree, college diploma or other post-secondary specialized training in their area of work. Many recent entrants have an undergraduate university degree or a community college diploma.
- They may require experience and be able to demonstrate directing, creative or performing skills.

In These Occupations...

- 82,000 people were employed in 1998, an increase of 36.4% from 1988. Most of the growth occurred from 1993 to 1998, when employment increased 30.4%. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: C050, U051, U010, C410, C030, C040, U410, T060

NOC 513

- 40% are musicians and singers; 22% are producers, directors, choreographers and related artists; and 18% are painters and other visual artists.
- 42% work part-time, well above the average of 19% for all occupations.
- 68% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 49% are women, compared to the average of 45% for all occupations.
- the unemployment rate averaged 5.1% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for professional occupations.
- the average earnings are among the lowest for professional occupations but are comparable to those for other occupations in the art, culture, recreation and sport sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Continued government spending restrictions in the cultural sector are likely to affect these occupations unfavourably. However, with the increased number of television channels, prospects for performing artists may be relatively favourable, as these channels will need to provide content. The continuing ability of Canada to attract foreign production will also have a favourable effect on prospects for performing artists.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the amusement and recreation services industry.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	38 900	51 500	65 000
Average	26 900	34 500	41 800
Lowest 20%	11 100	12 500	13 400

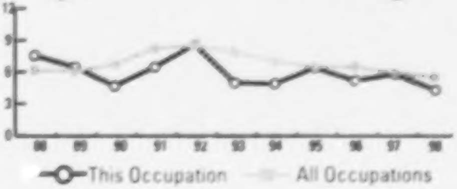
Overall Average for All Ages (15+)

This Occupation	All Occupations
38 300	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

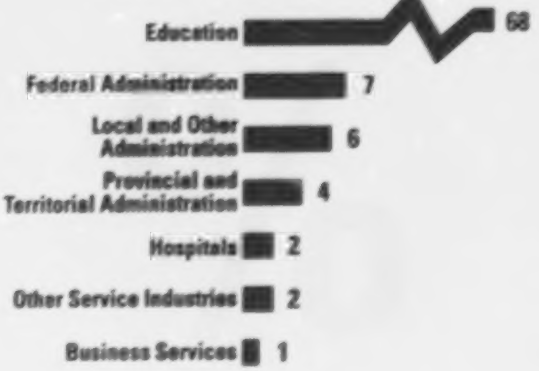
Unemployment Rate

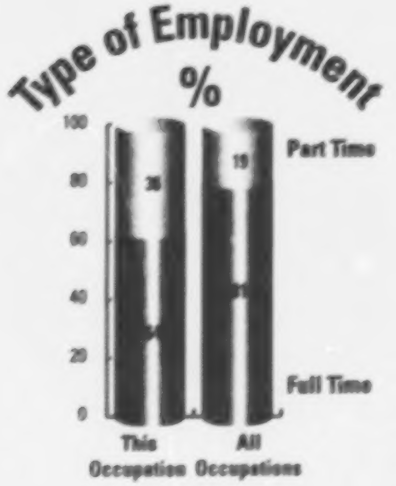


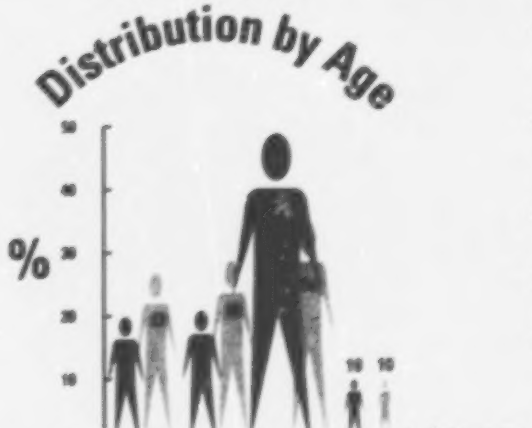
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Technical Occupations in Libraries, Archives, Museums and Galleries

Where They Work







At Work

People in this group are employed by libraries, schools, archives and organizations with library and archive services, museums, galleries and retail organizations. They may specialize in a specific type of collection.

- Library and archive technicians and assistants help users get information from library and archive resources, assist librarians and archivists in cataloguing new acquisitions and conduct reference searches.
- Conservation and restoration technicians assist conservators to preserve and restore artifacts.
- Curatorial assistants help research, handle and store artifacts.
- Museum guides and interpreters conduct museum and gallery tours of exhibitions.
- Museum registrars and cataloguers classify and register artifacts and supervise inventory control.
- Preparators construct displays and dioramas, and prepare artifacts for storage or shipping.
- Picture framers fabricate custom frames and mount paintings and other art work.

This occupational group also includes reference and circulation assistants.

Education, Training & Experience

- People in this group usually need a post-secondary qualification and specialized training. In some cases, appropriate work experience may serve as a substitute for academic qualifications. Many recent entrants have a community college diploma or an undergraduate university degree.
- Most require a college program in museum studies or conservation technology or other technical or on-the-job training programs.
- Library and archive technicians and assistants usually require a college library technician diploma or a university degree in a social science discipline.
- Registrars and cataloguers may require a university degree in a field related to museum and gallery work.

In These Occupations...

- 16,000 people were employed in 1998, an increase of 4.1% from 1988. However, after rising 7.4% over the 1988 to 1993

Check out the 'big picture' in "World of Work: Overviews and Trends"

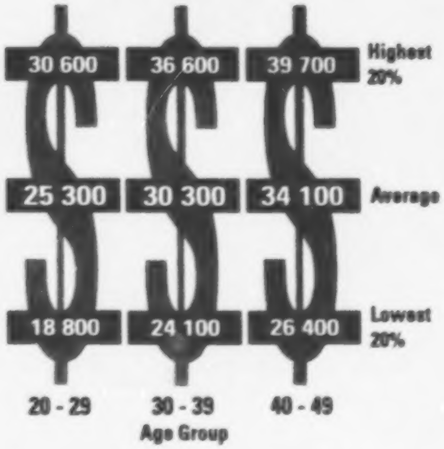
period, employment decreased 3.1% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.

- 78% are library and archive technicians and assistants and 22% work in technical occupations related to museums and galleries.
- 36% work part-time, well above the average of 19% for all occupations.
- 4% are self-employed, well below the average of 17% for all occupations.
- 79% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 4.7% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the lowest for technical, paraprofessional and skilled occupations and for occupations in the art, culture, recreation and sport sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities and earnings are both at average levels for all occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Technological change, in particular access to the Internet for a growing segment of the population, will lead to restructuring of library operations, providing easy access to a broadened range of reference materials. As a result, library and archival technicians will increasingly use computerized cataloguing and data retrieval systems.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in education.

Earnings



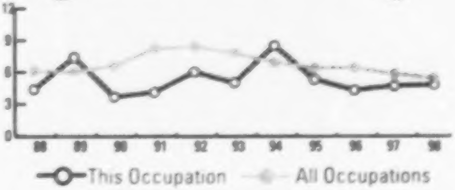
Overall Average for All Ages (15+)

32 600	37 400
This Occupation	**All Occupations**

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

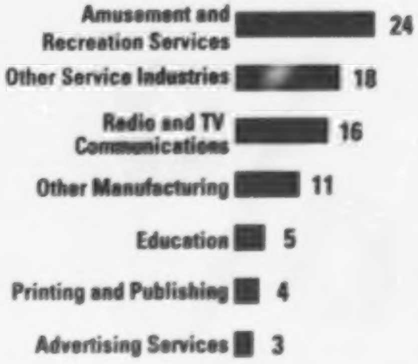
Unemployment Rate



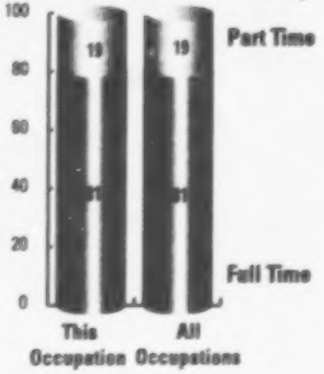
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Photographers, Graphics Arts Technicians and Technical Occupations in Motion Pictures, Broadcasting and the Performing Arts

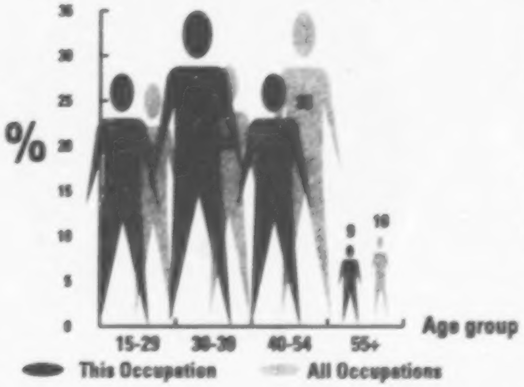
Where They Work



Type of Employment



Distribution by Age



At Work

These people work for photographic studios; government; radio and television stations; and film, video, sound recording, theatre, publishing, advertising and printing companies. They may also be self-employed.

- Photographers photograph people and other subjects. They may specialize in a particular area such as portrait or scientific photography.
- Film and video camera operators record news and live events, and film videos and television broadcasts.
- Graphic arts technicians produce and assemble artwork, photographs and lettering and prepare designs for camera-ready printing.
- Audio and video recording technicians record, mix and edit sound, music and videotape for films, television, radio, videos, recordings and live events.

This occupational group also includes floor directors, lighting technicians, stunt coordinators, special effects technicians, make-up artists, wardrobe supervisors, motion picture projectionists, set dressers and stagehands.

Education, Training & Experience

- People in this group usually need a high school diploma. Most require a college diploma, university degree or specialized training and experience in their area of work.
- They may substitute on-the-job training for formal education requirements.
- Projectionists need a provincial licence.

In These Occupations...

- 36,000 people were employed in 1998, an increase of 24.1% from 1988. After declining 2.3% over the 1988 to 1993 period, employment increased 27.0% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 26% are photographers; 17% are audio and video recording technicians; and 16% are graphic arts technicians.
- 19% are part-time, equal to the average for all occupations.
- 43% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed workers

Check out the 'big picture' in "World of Work: Overviews and Trends"

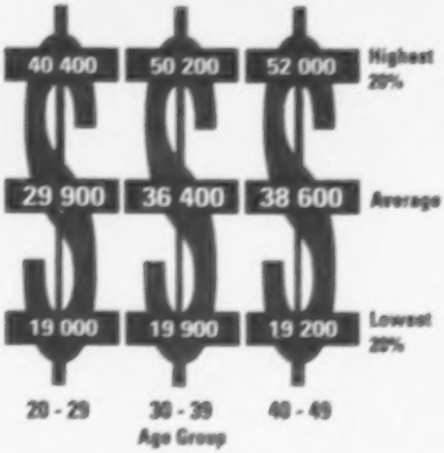
in these occupations has increased significantly over the last ten years.

- 24% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 6.3% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations and for other occupations in the art, culture, recreation and sport sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- The introduction of laser technology and digital photography will result in many photographers and graphic arts technicians using computer work stations.
- Areas of increasing demand for technicians include specialization in video editing, digital sound mixing and special optical effects.

Earnings



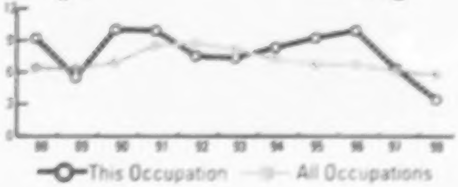
Overall Average for All Ages (15+)

This Occupation	All Occupations
35 300	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

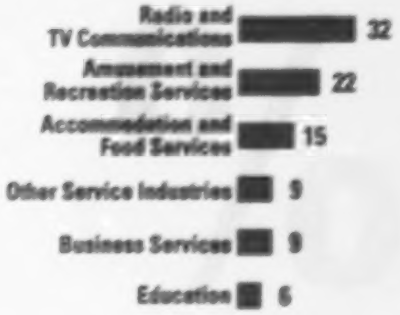
Unemployment Rate

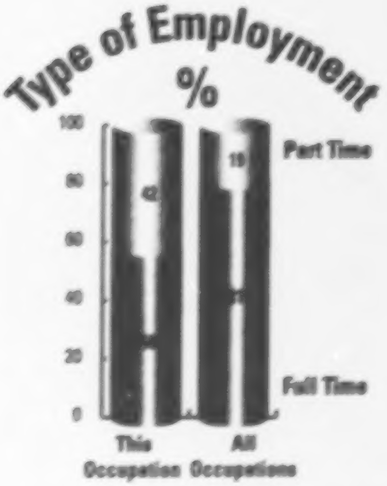


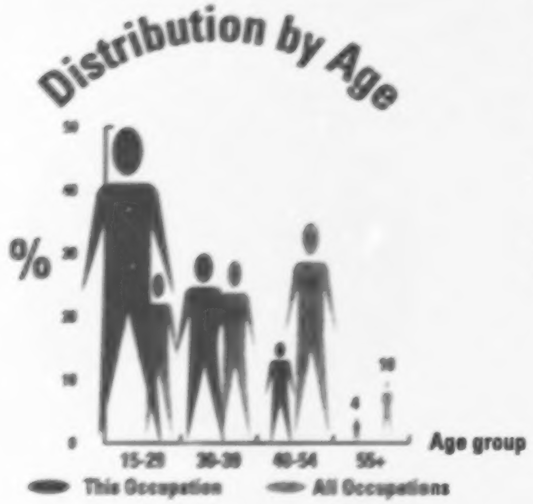
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Announcers and Other Performers

Where They Work







At Work

People in this group work for radio and television stations and networks, circuses and nightclubs, and for theatre, advertising and other production companies. They may also be self-employed.

- Announcers and other broadcasters read the news, sports, weather and commercial messages, and host entertainment and information programs for broadcast on radio or television. They may specialize in areas such as news, sports, weather or traffic reporting, and present their own material or material prepared by others.
- Circus performers such as trapeze artists, high-wire walkers, clowns and jugglers entertain audiences at circuses.
- Buskers entertain passers-by on sidewalks, and in malls and other areas with magic tricks, juggling acts, short dramatic works and other entertainment activities.
- Magicians and illusionists perform sleight-of-hand and other tricks to entertain audiences.
- Models display clothing and other merchandise in commercials, advertisements and fashion shows. They also pose for photographers and artists.
- Puppeteers operate puppets and marionettes.

This occupational group also includes disk jockeys, radio hosts, talk show hosts, traffic and weather reporters, and acrobats and ventriloquists.

Education, Training & Experience

- People in this group may require a high school diploma. Many recent entrants have a community college diploma.
- They usually have to demonstrate talent and ability at auditions.
- Announcers and other broadcasters usually need a college radio or television arts diploma and may require training and experience. Announcers need specialized voice training.
- Circus performers and acrobats may need to study at a circus school.
- Models usually require modelling courses.
- Many performers acquire their training under the guidance of another performer.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: C410, C050

NOC 523

In These Occupations...

- 11,000 people were employed in 1998, a decrease of 2.2% from 1988. However, after declining 3.4% over the 1988 to 1993 period, employment increased 1.2% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 69% are announcers and broadcasters.
- 42% work part-time, well above the average of 19% for all occupations. The proportion of part-time workers in these occupations has increased significantly over the last ten years.
- 30% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 35% are women, compared to an average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 6.6% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations and for other occupations in the art, culture, recreation and sport sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, the outlook is expected to weaken to "Limited", as the number of qualified job seekers is expected to exceed the number of job openings, due to anticipated employment losses. Retirements are not expected to offset employment losses since the age distribution in these occupations is relatively young.
- Cutbacks at the CBC/SRC and other publicly owned broadcasters have decreased demand for announcers. The best opportunities are expected to be in private television channels.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	32 900	50 300	59 100
Average	25 100	34 700	43 900
Lowest 20%	14 100	15 100	25 200

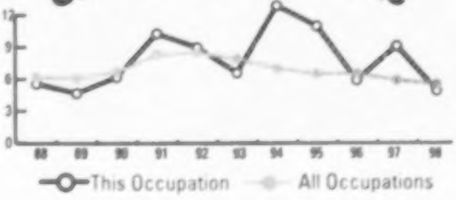
Overall Average for All Ages (15+)

This Occupation	All Occupations
39 200	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	FAIR
LIMITED	[✓ LIMITED]

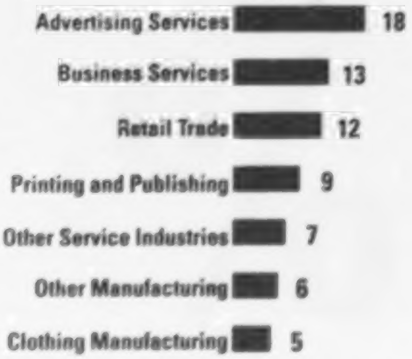
Unemployment Rate



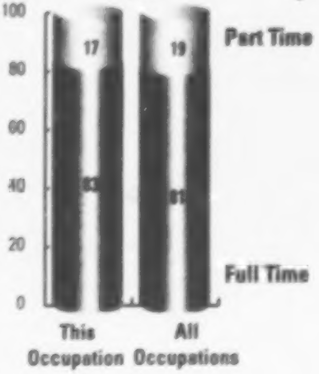
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Creative Designers and Craftspersons

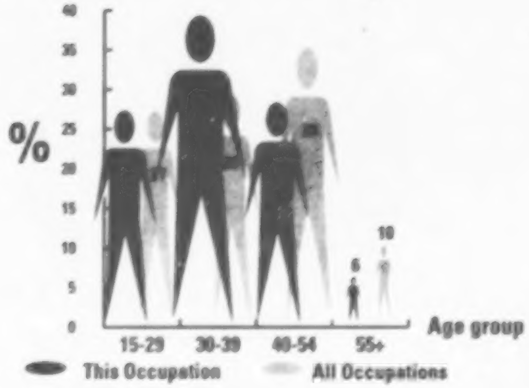
Where They Work



Type of Employment %



Distribution by Age



At Work

People in this group work for graphic design, advertising, architectural and interior design firms; retail organizations; performing arts, broadcasting, clothing and textile companies; museums; private studios; and other organizations. They may also be self-employed.

- Graphic designers conceptualize and produce designs, illustrations, layouts and visual images for publications, advertising, films, posters and signs.
- Interior designers conceptualize and produce designs for interior spaces in residential, commercial and other buildings.
- Theatre designers conceptualize and produce designs for sets, costumes and lighting, fashion designers for clothing and accessories.
- Exhibit designers produce designs for museums, trade shows and retail spaces.
- Artisans and craftspersons produce wood, stone and other carvings; blown-glass objects; pottery; stained glass items; stringed instruments; and other products.
- Pattern makers create master patterns for garments, footwear and other textile, leather and fur products.

Education, Training & Experience

- People in this group usually need a high school diploma. Most recent entrants have a community college diploma or an undergraduate university degree.
- Designers usually require a college diploma, university degree or other training program, and a portfolio of work that demonstrates creative ability.
- Interior designers may require registration with a provincial association.
- Pattern makers require college courses in design and pattern-making courses or on-the-job training. They may require computer-assisted pattern-making courses.
- Artisans and craftspersons may not require any high school education. Rather, they may learn skills through apprenticeship with a master craftsperson.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 5241
Part 2 Field of Study Cross-index: C060, T060, C040, C030, C050, U010, T040

NOC 524

In These Occupations...

- 73,000 people were employed in 1998, an increase of 45.7% from 1988. Most of the growth occurred from 1993 to 1998, when employment increased 39.7%. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 49% are graphic designers and illustrating artists and 25% are artisans and craftspersons.
- 17% work part-time, compared to an average of 19% for all occupations.
- 44% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 51% are women, compared to an average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 4.7% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the lowest for technical, paraprofessional and skilled occupations and for occupations in the art, culture, recreation and sport sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities are above average and earnings are below average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- More and more, people in these occupations will rely on computers to present concepts to clients, produce final designs and manage projects.
- Employment requirements for these occupations are expected to increase across a broad range of industries through 2004, with much of the increase in business services and advertising services.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	36 600	45 100	48 000
Average	27 800	32 800	32 800
Lowest 20%	17 600	17 300	13 900

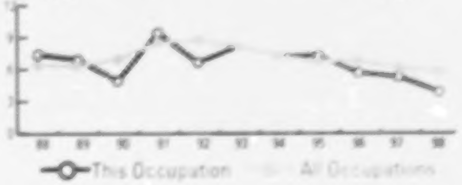
Overall Average for All Ages (15+)

This Occupation	All Occupations
30 700	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate



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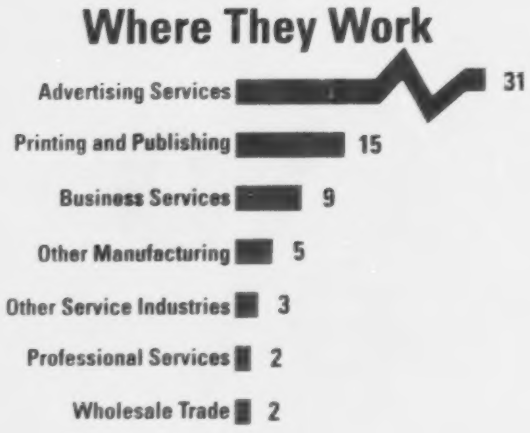
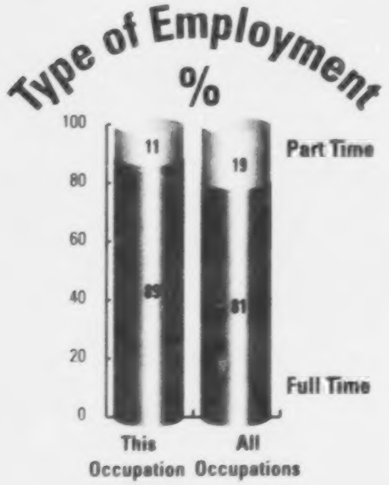
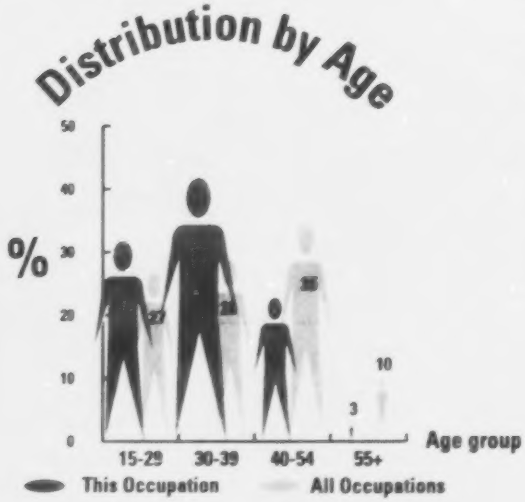
Graphic Designers and Illustrating Artists







At Work

People in this occupation work for advertising and graphic design firms and other organizations with advertising departments. Graphic designers and illustrating artists may also be self-employed. Their duties may require them to:

- consult with clients to establish the nature and content of designs and illustrations for reproduction;
- determine the best medium to produce the desired effect, and the method of reproduction;
- prepare sketches, photographs and illustrations;
- work by hand or with computerized graphic programs;
- prepare specifications and estimate the cost of materials and the time to complete graphic designs or illustrations; and
- produce final designs and illustrations or supervise the work of other graphic designers, illustrators and graphic arts technicians.

This occupation also includes animators, medical and scientific illustrators, commercial artists, advertising and layout designers, page designers and title artists.

Education, Training & Experience

- People in this occupation must have a high school diploma and creative ability as demonstrated by a portfolio of work. Most recent entrants have a community college diploma or some other post-secondary diploma or degree.
- They usually must complete a university degree in visual arts with a specialization in graphic arts, commercial art or photography, or a college or other program in graphic arts or commercial art.
- They may require experience as graphic arts technicians, which could replace formal education after high school.
- With experience, they may progress to management positions such as advertising manager.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 524
Part 2 Field of Study Cross-index: C060, C040, U010, U410, C720

NOC 5241

In These Occupations…

- 36,000 people were employed in 1998, an increase of 72.9% from 1988. Most of the growth occurred from 1993 to 1998 when employment increased 58.0%. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 11% work part-time, compared to an average of 19% for all occupations.
- 32% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed workers in this occupation has increased significantly over the last ten years.
- 40% are women, compared to an average of 45% for all occupations.
- the unemployment rate averaged 4.4% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations and for other occupations in the art, culture, recreation and sport sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", as employment opportunities are above average and earnings are at the average level.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- People in this occupation increasingly use computerized page layout and graphic design systems in their work. Multimedia presentations and animated graphics are two types of work made far easier by computers.
- Web site design may offer good opportunities for graphic designers and illustrators, especially those with multimedia skills.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the advertising services, printing and publishing and business services industries.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	33 456	43 842	47 190
Average	25 942	33 188	35 271
Lowest 20%	16 886	20 002	19 981

Age Group

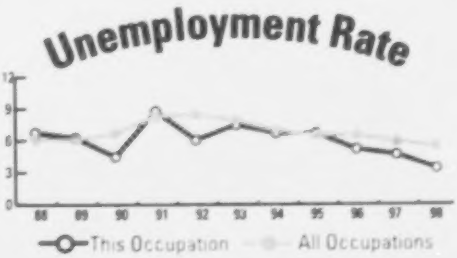
Overall Average for All Ages (15+)

This Occupation	All Occupations
31 995	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

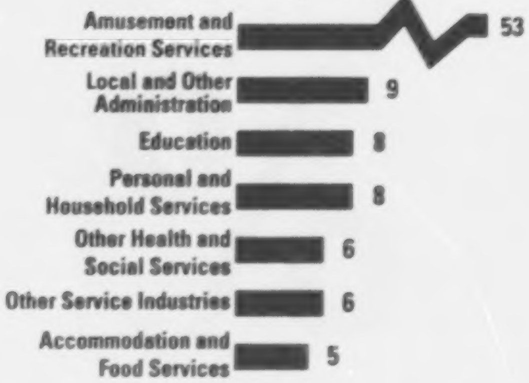
Unemployment Rate



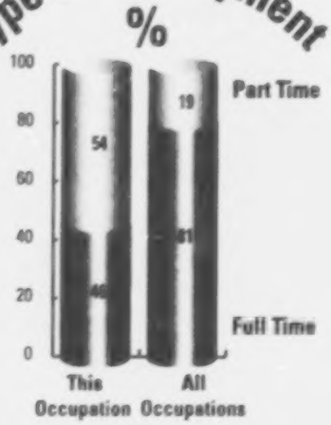
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Athletes, Coaches, Referees and Related Occupations

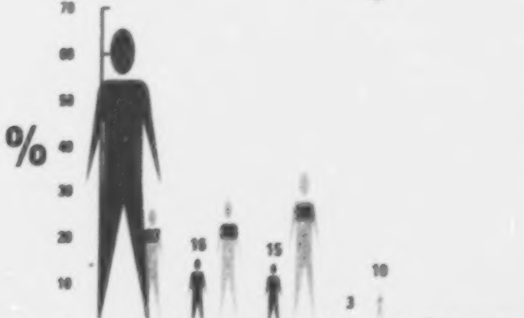
Where They Work



Type of Employment



Distribution by Age



At Work

People in this group work for professional team organizations; amateur sports teams; sporting commissions, organizations and leagues; community centres; universities; sports and fitness clubs; and similar facilities. They may also be self-employed.

- Athletes participate in competitive sports events on an amateur or professional basis. They play team sports such as hockey, baseball and football, or compete in individual sports such as figure skating, track and field and boxing.
- Coaches prepare and train individual athletes and teams for competitive events.
- Sports scouts identify and recruit athletes for professional sports teams.
- Sports officials and referees observe and enforce rules governing sporting events, athletic games and sports competitions.
- Program leaders and instructors in recreation and sport plan and coordinate recreational, sports, fitness and athletic programs for individuals and groups.

Education, Training & Experience

- People in this group usually require ability, experience and technical knowledge of their area of sport. Many recent entrants have a high school diploma.
- Athletes need extensive training under a coach's supervision and may require certification with a particular sports federation.
- Coaches usually need to complete the national coaching certificate program and have technical knowledge of the sport.
- Sports officials require certification and registration with a sport governing agency or commission.
- Referees must complete an officiating program from a sport governing agency.
- Program leaders and instructors usually need a high school diploma as well as a college diploma in recreation or physical education, or extensive experience in a specific recreational or sports program. They usually require certificates such as a swimming instructor's certificate for particular recreational activities.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: U250, U870, U240, C893, M870, M240

NOC 525

In These Occupations...

- 71,000 people were employed in 1998, an increase of 36.9% from 1988. After employment gains of 13.9% from 1988 to 1993, employment grew 20.2% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 81% are program leaders and instructors in recreation and sport.
- 54% work part-time, well above the average of 19% for all occupations. The proportion of part-time workers in these occupations has increased significantly over the last ten years.
- 14% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 59% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 9.6% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for technical, paraprofessional and skilled occupations and for occupations in art, culture, recreation and sport.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations and for other occupations in the art, culture, recreation and sport sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, the outlook is expected to weaken to "Limited". A large influx of recent graduates looking for work in these occupations is expected to lead to rapid growth in the number of qualified job seekers. As a result, despite significant growth in employment opportunities, the number of job seekers is expected to exceed the number of job openings.
- Employment in these occupations will be affected by federal and provincial government spending restrictions on aid to sports organizations.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the amusement and recreation services industry.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	30 100	46 300	53 100
Average	27 500	35 700	38 000
Lowest 20%	13 100	18 600	19 800

Age Group

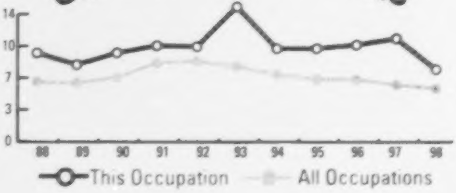
Overall Average for All Ages (15+)

This Occupation	All Occupations
35 700	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	FAIR
LIMITED	[✓ LIMITED]

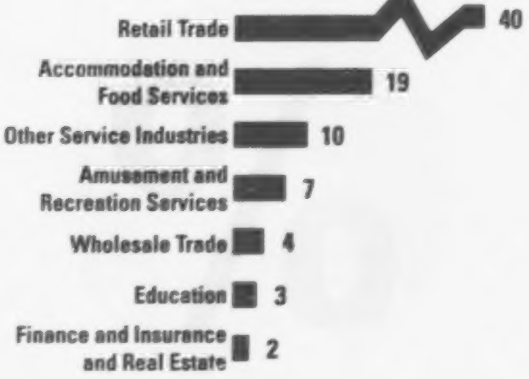
Unemployment Rate

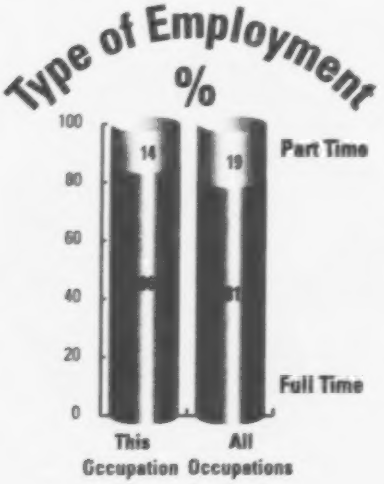


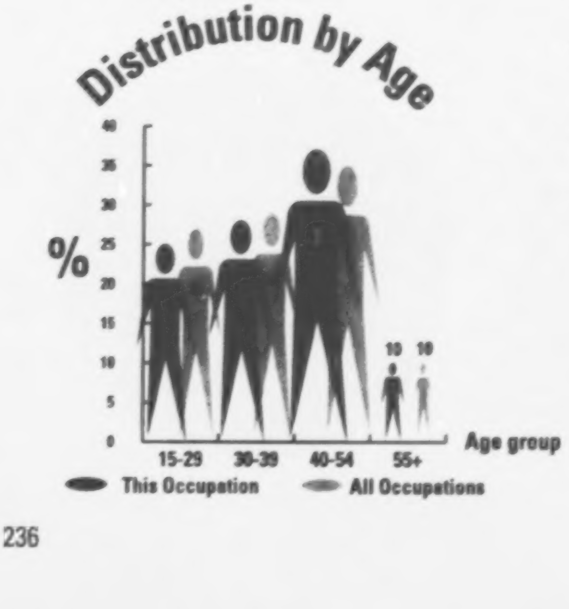
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Sales and Service Supervisors

Where They Work







At Work

These people work in retail organizations, telephone and door-to-door sales, hospitals and other health care institutions, cafeterias, catering companies and other food service facilities, dry cleaners, laundries, hotels, schools, cleaning companies, office buildings and other service organizations in the private sector and government. Their duties may require them to:

- supervise, coordinate and schedule activities of staff;
- establish and implement procedures;
- coordinate work with that of other departments;
- estimate and order materials and supplies;
- monitor quality and production levels;
- resolve work-related problems and prepare and submit budget, progress and other reports;
- maintain inventory and records; and
- hire and train staff.

This occupational group also includes dry cleaning, laundry and cleaning supervisors; executive housekeepers; and supervisors of workers such as hotel clerks, theatre ushers and attendants, reservation clerks, commissionaires and sport and recreation club workers.

Education, Training & Experience

- People in this group usually need a high school diploma and previous experience in their area of work. Many recent entrants have a high school diploma.
- Food service supervisors require a college diploma in food service administration, hotel and restaurant management or a related discipline, or several years' experience in food preparation and service.
- Executive housekeepers usually require a college diploma or university degree in hospital or hotel management or business administration. They may substitute extensive experience as a cleaning supervisor for educational requirements.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: C121, C812, U120, T141, T810, C830, T121, T812

NOC 621

In These Occupations...

- 114,000 people were employed in 1998, an increase of 29.6% from 1988. After employment gains of 17.5% from 1988 to 1993, employment growth slowed to 10.3% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 50% are retail trade supervisors; 19% are food service supervisors; and 14% are cleaning supervisors.
- 14% work part-time, compared to an average of 19% for all occupations.
- 27% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 51% are women, compared to an average of 45% for all occupations.
- the unemployment rate averaged 4.1% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the lowest for technical, paraprofesssional and skilled occupations but are comparable to those for other occupations in the sales and service sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities are average, although earnings are below average.
- Over the next five years, the outlook is expected to improve to "Good". The number of job openings is expected to increase more rapidly than the number of qualified job seekers, due to strong employment growth and high retirement rates for sales and service supervisors.
- The widespread use of computerized inventory control and order-entry systems will require these supervisors to upgrade their skills.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the retail trade and accommodation and food services industries.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	33 300	42 900	47 800
Average	25 000	32 100	35 000
Lowest 20%	16 400	19 500	20 700

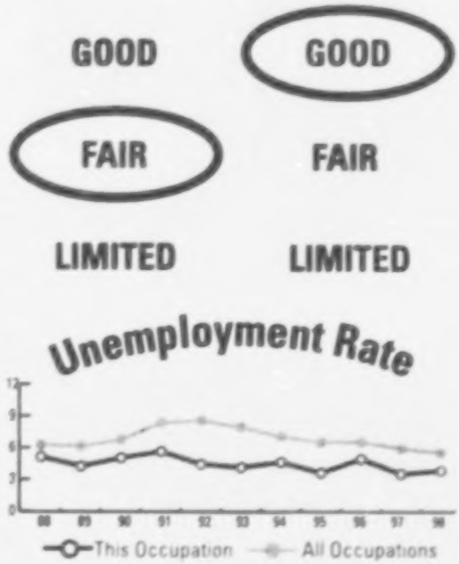
Overall Average for All Ages (15+)

This Occupation	All Occupations
31 600	37 400

Work Prospects

CURRENT	2004
GOOD	[✓ GOOD]
[✓ FAIR]	FAIR
LIMITED	LIMITED

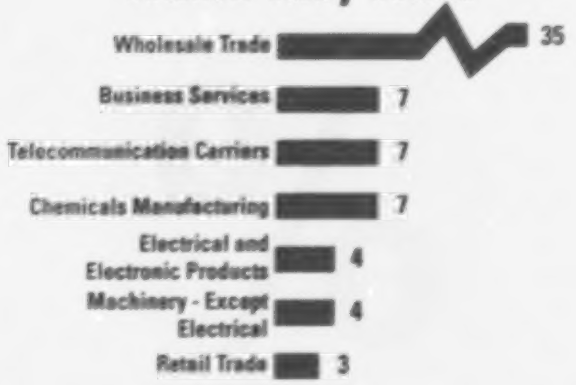
Unemployment Rate

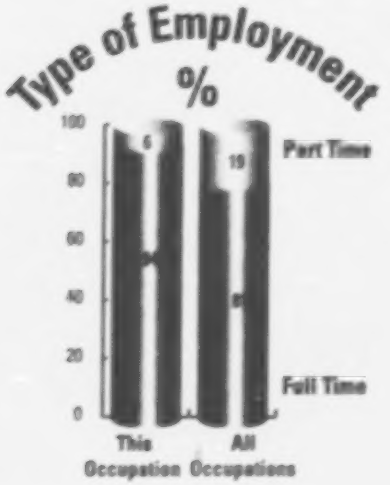


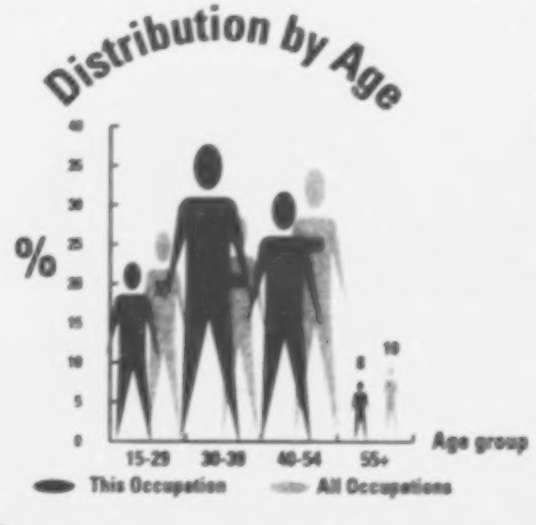
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Technical Sales Specialists, Wholesale Trade

Where They Work







At Work

Technical sales specialists work for wholesalers, pharmaceutical companies, industrial equipment manufacturing companies, computer services and engineering firms, hydro-electric companies, and other organizations that produce and provide technical goods and services. They may specialize in selling scientific and industrial products, telecommunication and computer services and other particular products or services. Their job duties may require them to:

- promote sales to existing clients, and identify and solicit potential clients;
- assess the needs and resources of clients and recommend appropriate goods and services;
- provide input into product design where goods or services must meet clients' specific needs;
- develop reports and proposals and deliver presentations;
- estimate costs of installation and maintenance of equipment and service; and
- prepare and administer sales contracts.

This occupation also includes representatives in sales of aircraft, communication equipment, construction equipment, heavy duty equipment, electricity and medical instrumentation.

Education, Training & Experience

- Technical specialists require a high school diploma. Most recent entrants have a community college diploma or an undergraduate university degree.
- They may need experience in sales or in a technical occupation related to the product and service they sell.
- Technical sales supervisors need experience as a technical sales specialist.
- With additional training or experience, they may move into sales management positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: U120, C140, M120, U620, C362, T362, T141

NOC 622

In These Occupations...

- 92,000 people were employed in 1998, an increase of 49.8% from 1988. Most of the growth occurred from 1993 to 1998, when employment increased 30.0%. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 6% work part-time, well below the average of 19% for all occupations.
- 21% are self-employed, compared to an average of 17% for all occupations.
- 21% are women, well below the average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 3.6% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations in the sales and service sectors.
- the average earnings are comparable to those for other technical, paraprofesssional and skilled occupations and for other occupations in the sales and service sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Rapid technological change means those working in these occupation must stay abreast of ever-changing product lines available on the market. Increasingly, these representatives will need to use electronic data banks to retrieve information for their customers.
- Employment requirements for these occupations are expected to increase across a broad range of industries through 2004, with much of the increase in the wholesale trade and business services industries.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	34 600	46 200	50 100
Average	26 600	35 900	37 400
Lowest 20%	17 400	22 000	21 300

Age Group

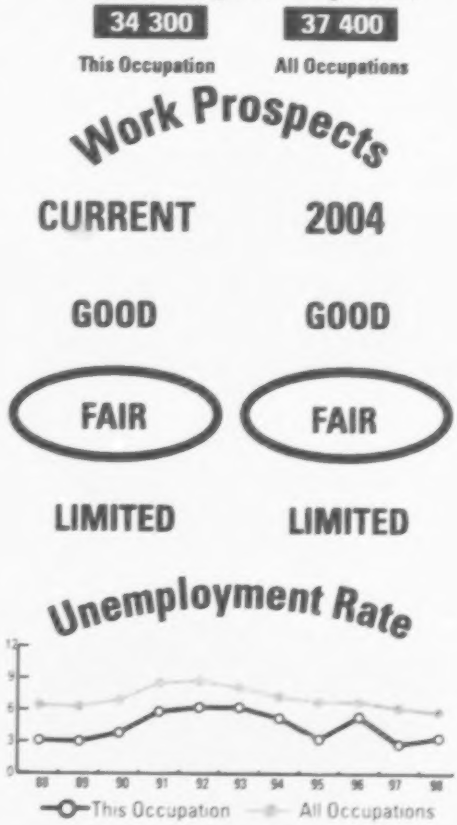
Overall Average for All Ages (15+)

This Occupation	All Occupations
34 300	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

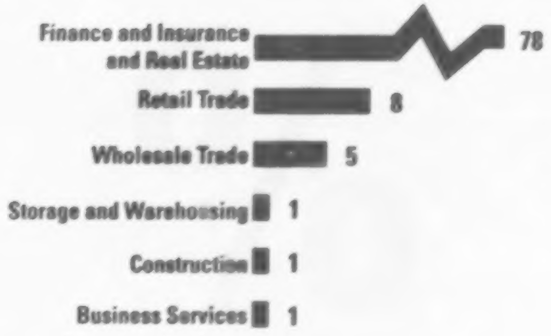
Unemployment Rate

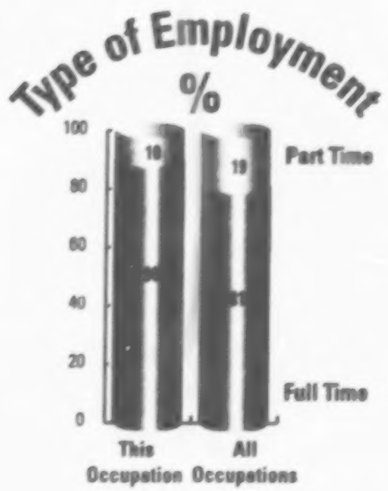


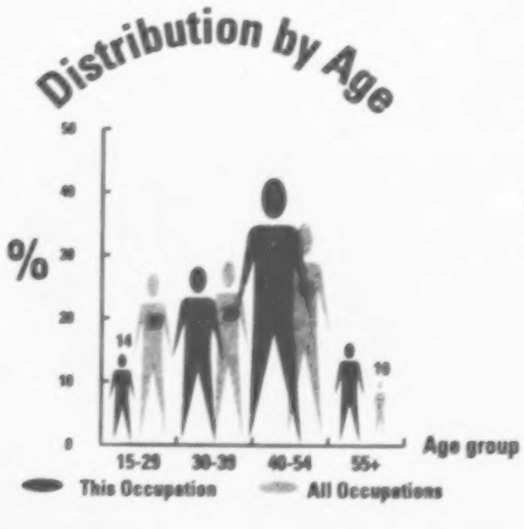
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Insurance and Real Estate Sales Occupations and Buyers

Where They Work







At Work

People in this group work for insurance companies and brokerage firms, real estate companies, retail and wholesale organizations and licensed grain elevator companies.

- Insurance agents and brokers sell automobile, fire, life, property, marine, aircraft and other types of insurance to businesses and individuals.
- Real estate agents and salespersons act as agents for the sale and purchase of houses, apartments, commercial buildings, land and other real estate. They may rent and lease properties on behalf of clients.
- Retail and wholesale buyers purchase merchandise for resale by retail and wholesale organizations, and are usually responsible for the merchandising operations of retail organizations. They may specialize in particular merchandise lines.
- Grain elevator operators purchase grain from farmers; determine the grade, quality and weight of grain delivered; and maintain records for farmers, companies and the Canadian Wheat Board.

This occupational group also includes real estate brokers, chief and senior buyers, merchandisers, and assistant and district grain elevator managers.

Education, Training & Experience

- People in this group require a high school diploma. Most recent entrants have a community college diploma or an undergraduate university degree.
- Insurance brokers require step licensing. They can also receive professional recognition as a member of the Insurance Brokers Association of Canada, by completing educational programs such as the Canadian Accredited Insurance Broker and Canadian Certified Insurance Broker programs.
- They usually require college, university or specialized training in their area of work.
- Real estate practitioners must have a licence.
- Grain elevator operators require several years' experience working in a grain elevator and may require a pesticide licence. They receive on-the-job training.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 6231, 6232, 6233
Part 2 Field of Study Cross-index: U120, C121, U050, T121

NOC 623

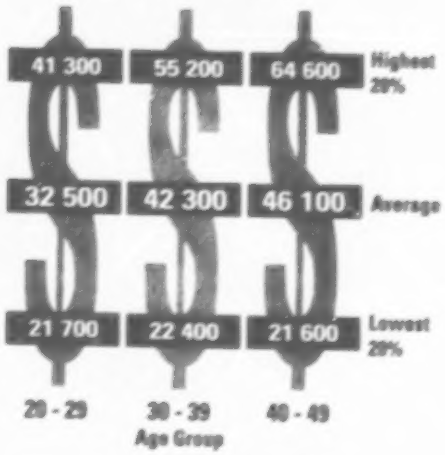
In These Occupations...

- 162,000 people were employed in 1998, an increase of 12.4% from 1988. However, after rising 16.7% over the 1988 to 1993 period, employment decreased 3.6% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 42% are real estate agents and salespersons; 40% are insurance agents and brokers; and 16% are retail and wholesale buyers.
- 11% work part-time, compared to an average of 19% for all occupations.
- 45% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 45% are women, equal to the average for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 2.0% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for technical, paraprofessional and skilled occupations and for occupations in the sales and service sectors.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations and for occupations in the sales and service sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities and earnings are both well above the average levels for comparable occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Increasing use of computer-based technologies will affect the work and skill requirements for people employed in all of these occupations.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the finance, insurance and real estate industry.

Earnings



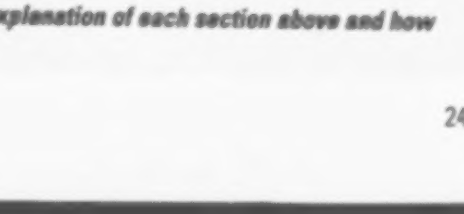
Overall Average for All Ages (15+)

42 300	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

Unemployment Rate



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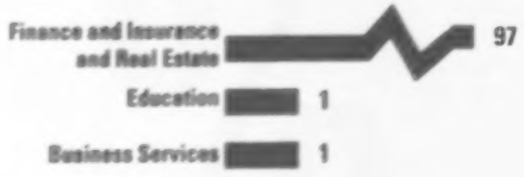
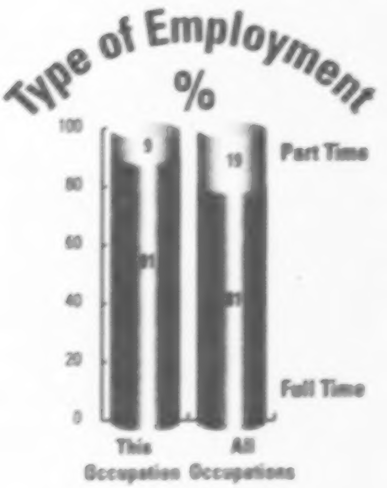
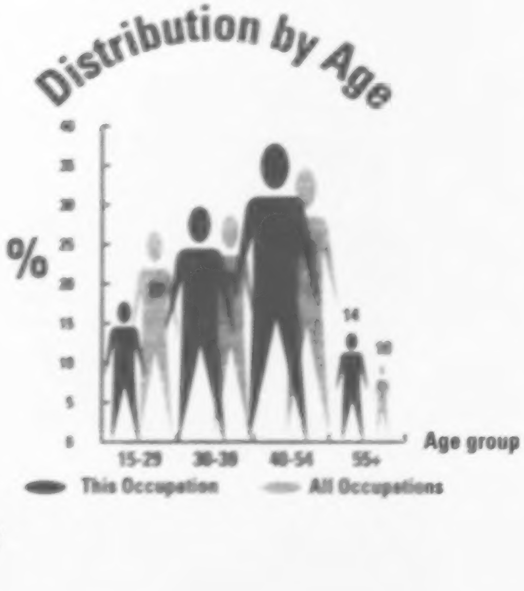
Insurance Agents and Brokers

Where They Work







At Work

Insurance agents work for individual insurance companies to sell that company's products to clients. Insurance brokers work for brokerage firms and find appropriate insurance products through several insurance companies on behalf of clients. Their duties may require them to:

- sell automobile, fire, health, life, property, marine, aircraft and other types of insurance to clients;
- establish clients' insurance coverage, premiums and methods of payment;
- provide information on group and individual insurance packages such as risk coverage, benefits and other policy features;
- ensure that clients provide the appropriate forms, medical examinations and other policy requirements; and
- respond to clients' questions when claims are made.

Education, Training & Experience

- People in this occupation must complete high school, on-the-job training and industry-sponsored courses and training programs. Most recent entrants have a community college diploma or an undergraduate university degree.
- Insurance brokers require step licensing.
- They can also receive professional recognition as a member of the Insurance Brokers Association of Canada, by completing educational programs such as the Canadian Accredited Insurance Broker and Canadian Certified Insurance Broker programs.
- With experience, they may progress to insurance management positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 623
Part 2 Field of Study Cross-index: U120, C121, U880

NOC 6231

In These Occupations...

- 66,000 people were employed in 1998, an increase of 22.2% from 1988. After employment gains of 21.6% from 1988 to 1993, employment growth slowed to 0.5% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 9% work part-time, well below the average of 19% for all occupations.
- 36% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed workers in this occupation has increased significantly over the last ten years.
- 47% are women, compared to an average of 45% for all occupations. The proportion of women in this occupation has increased significantly over the last ten years.
- the unemployment rate averaged 2% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for technical, paraprofessional and skilled occupations and for occupations in the sales and service sectors.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations and for occupations in the sales and service sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since employment opportunities and earnings are both well above the average levels for comparable occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Expert systems will be used increasingly in the insurance industry, and computerized telecommunications will link brokerages to insurance firms. Insurance agents and brokers will need to develop strong computer skills to exploit these technologies.
- Almost all of the increase in employment requirements through 2004 for this occupation is expected to occur in the finance, insurance and real estate industry.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	38 700	49 100	64 800
Average	31 300	39 000	46 900
Lowest 20%	21 700	23 000	25 000

Age Group

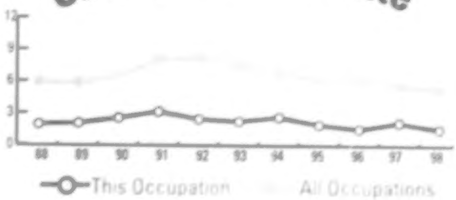
Overall Average for All Ages (15+)

This Occupation	All Occupations
42 500	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

Unemployment Rate



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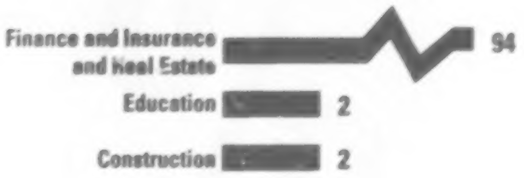
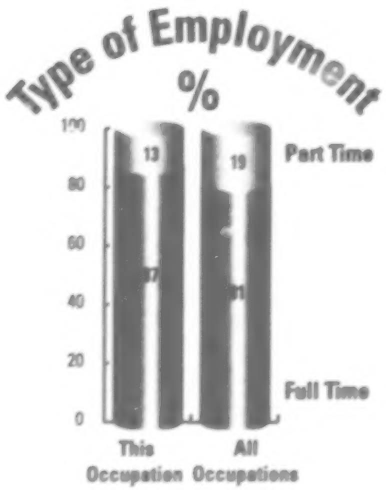
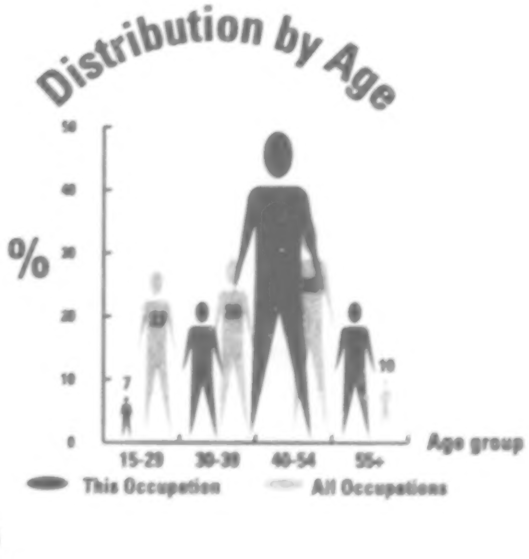
Real Estate Agents and Salespersons

Where They Work







At Work

People in this occupation work in the real estate industry, normally on a commission basis. Their duties may require them to:

- assist individuals and companies in the sale and purchase of houses, apartments, commercial buildings, land and other real estate;
- solicit property listings from prospective sellers;
- assist sellers by establishing the asking price, advertising the property, marketing the property and conducting open houses for prospective buyers;
- assist buyers in selecting, visiting, inspecting and making offers to purchase real estate;
- advise sellers and buyers on market conditions, prices, mortgages, legal requirements and related matters;
- draw up sales agreements for approval by sellers and buyers; and
- rent or lease properties on behalf of clients.

Education, Training & Experience

- People in this occupation must complete high school and a real estate training course. Most recent entrants have a community college diploma or undergraduate university degree.
- They require a provincial licence in their province.
- They may operate independently by obtaining a broker's licence according to the regulations in their province. A broker's licence is necessary to become a real estate manager.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 623
Part 2 Field of Study Cross-index: U120, U850, U240, U420

NOC 6232

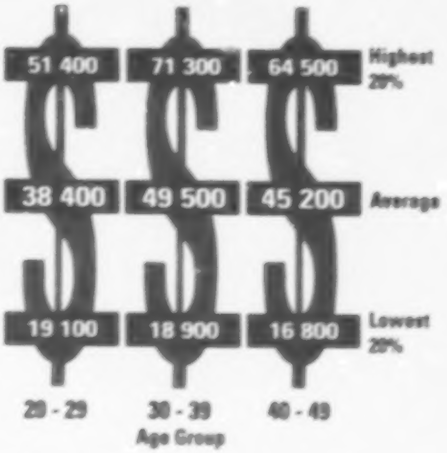
In These Occupations...

- 68,000 people were employed in 1998, a decrease of 1.7% from 1988. After rising 8.9% over the 1988 to 1993 period, employment decreased 9.7% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 13% work part-time, compared to an average of 19% for all occupations.
- 63% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed workers in this occupation has increased significantly over the last ten years.
- 45% are women, equal to the average for all occupations. The proportion of women in this occupation has increased significantly over the last ten years.
- the unemployment rate averaged 0.5% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for technical, paraprofessional and skilled occupations and for occupations in the sales and service sectors.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations and for occupations in the sales and service sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since employment opportunities and earnings are both well above the average levels for comparable occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Computer-based technologies will become increasingly common in this field. For example, laptop computers linked to the central office will be used to show properties to clients. Real estate agents and salespersons will need to develop the skills required by these technologies.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the finance, insurance and real estate industry.

Earnings



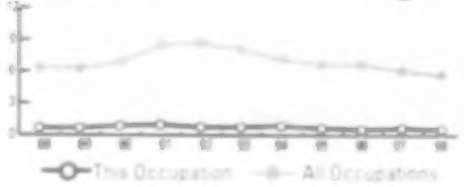
Overall Average for All Ages (15+)

42 900	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

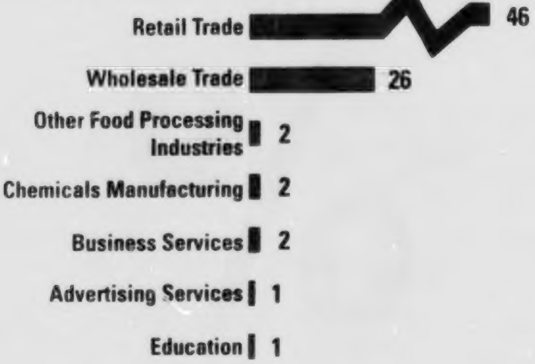
Unemployment Rate

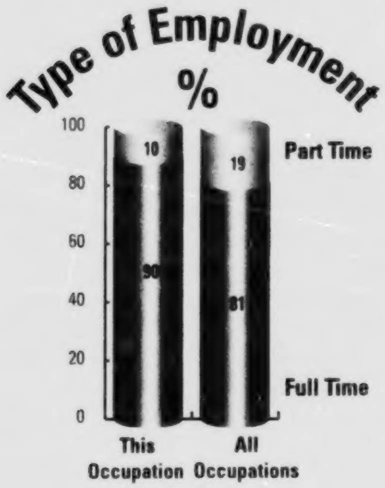


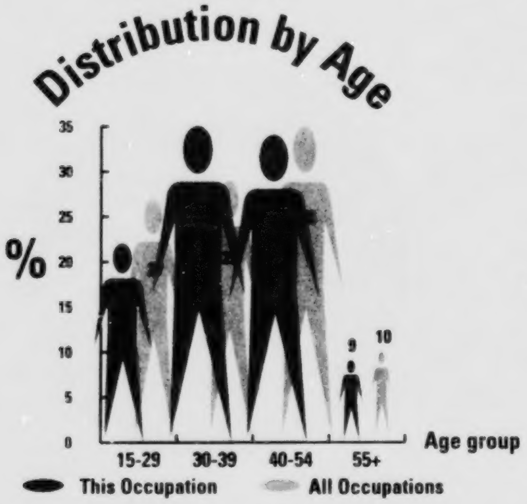
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Retail and Wholesale Buyers

Where They Work







At Work

People in this occupation work for retail and wholesale organizations. Their duties may require them to:

- purchase merchandise from suppliers such as manufacturers, importers and brokers for sale in retail and wholesale organizations;
- review requirements of their organizations and determine the quantity and type of merchandise to purchase;
- study market reports, trade periodicals and sales promotion materials and visit trade shows, showrooms, factories and product design events;
- establish and maintain contact with suppliers and negotiate prices, discounts, credit terms and transportation arrangements with them;
- oversee distribution of merchandise to outlets and maintain stock levels; and
- supervise the work of other buyers.

Education, Training & Experience

- People in this occupation usually must complete high school and have a university degree or college diploma in business, marketing or a related program. Many recent entrants have a community college diploma or an undergraduate university degree.
- They must have experience as sales supervisors or sales representatives.
- Supervisors and senior buyers must have experience.
- They may specialize in a particular merchandise line through experience or product-based training courses.
- With additional experience or training, they may progress to managerial positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 623
Part 2 Field of Study Cross-index: U120, C141, C121, U820, C131

NOC 6233

In These Occupations...

- 26,000 people were employed in 1998, an increase of 36.1% from 1988. After employment gains of 27.7% from 1988 to 1993, employment growth slowed to 6.6% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the last ten years and 8.2% over the last five years.
- 10% work part-time, compared to an average of 19% for all occupations.
- 24% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in this occupation has increased significantly over the last ten years.
- 46% are women, compared to an average of 45% for all occupations. The proportion of women in this occupation has increased significantly over the last ten years.
- the unemployment rate averaged 5.6% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations and for occupations in the sales and service sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since employment opportunities are average and earnings are well above the average level for comparable occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Buyers will increasingly use computerized inventory systems to track the sales of various items and computerized ordering systems to place orders with their suppliers. Buyers will need to develop the appropriate computer skills.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the wholesale trade and retail trade industries.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	39 300	47 800	59 400
Average	30 400	38 600	45 700
Lowest 20%	21 600	24 500	26 400
		Age Group	

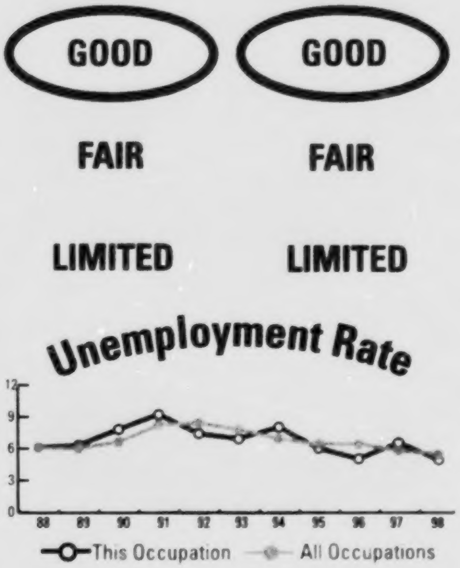
Overall Average for All Ages (15+)

This Occupation	All Occupations
39 600	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

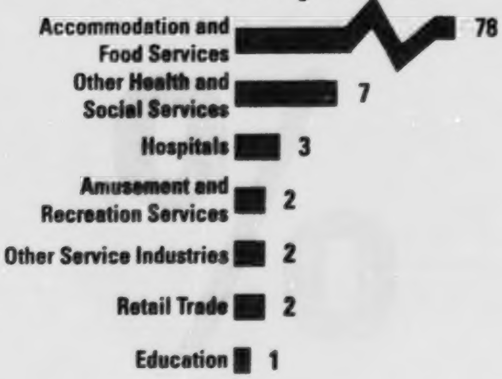
Unemployment Rate

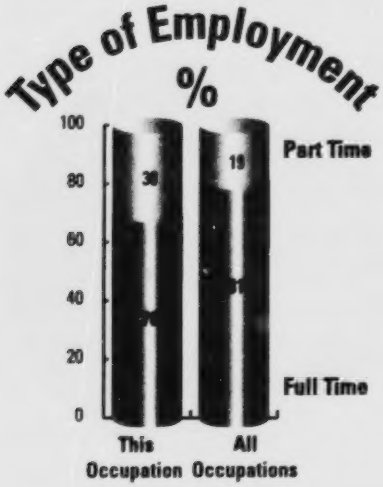


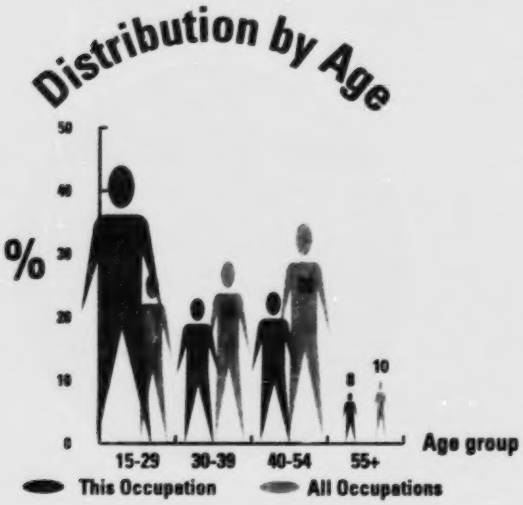
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Chefs and Cooks

Where They Work







At Work

Chefs and cooks work in restaurants, hotels, hospitals, educational institutions, central food commissaries, ships, construction and logging camps and other organizations.

- Executive chefs direct food preparation in one or more restaurant chains and other establishments. They plan menus, hire and supervise chefs and cooks and may prepare meals.
- Executive sous-chefs supervise chefs, cooks, specialist chefs and other kitchen workers. They may plan menus and prepare meals.
- Working chefs prepare meals or specialize in pastry, sauces, salads, meats and other foods. They may also supervise kitchen staff and plan menus.
- Cooks prepare a variety of foods, including short orders, and supervise kitchen workers. They may plan menus and specialize in ethnic cuisine or speciality dishes.

Education, Training & Experience

- People in this group usually complete high school. Many recent entrants have a high school diploma.
- Cooks complete a three-year apprenticeship or a college or other program in cooking, or have several years' commercial cooking experience.
- Cook trade qualification is available in all provinces except Quebec, the Northwest Territories and the Yukon.
- Supervising chefs, sous-chefs, chefs and working chefs require a chef apprenticeship or formal training abroad or equivalent training and experience.
- Supervisors and administrators usually require several years' experience, including two years' supervisory experience in commercial food preparation and experience as a chef.
- Sous-chefs, working chefs and chefs usually require several years' experience in commercial food preparation.
- The admission certification program for more highly skilled chefs and cooks is administered by the Canadian Culinary Institute through the Canadian Federation of Chefs and Cooks.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: T810, C812, T812, T811, U630

NOC 624

In These Occupations...

- 180,000 people were employed in 1998, an increase of 19.1% from 1988. After employment gains of 6.5% from 1988 to 1993, employment grew 11.8% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 90% are cooks and 10% are chefs.
- 30% work part-time, well above the average of 19% for all occupations.
- 3% are self-employed, well below the average of 17% for all occupations.
- 42% are women, compared to the average of 45% for all occupations.
- the unemployment rate averaged 10.1% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for technical, paraprofessional and skilled occupations and for occupations in the sales and service sectors.
- the average earnings are among the lowest for technical, paraprofessional and skilled occupations and for occupations in the sales and service sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited", since employment opportunities and earnings are both well below average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- According to the Canadian Federation of Chefs and Cooks, the best trained chefs and cooks are in high demand.
- Increasing computerization in kitchens - for example, for recipe retrieval and inventory control - will require that these workers have appropriate skills.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the accommodation and food services industry.

Earnings

20 - 29	30 - 39	40 - 49	
27 300	32 900	34 700	Highest 20%
20 000	23 700	24 800	Average
12 700	13 200	13 000	Lowest 20%

Age Group

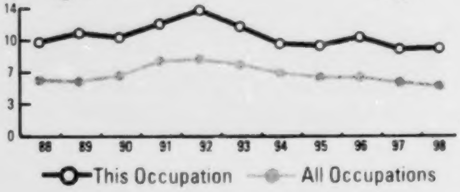
Overall Average for All Ages (15+)

This Occupation	All Occupations
23 100	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

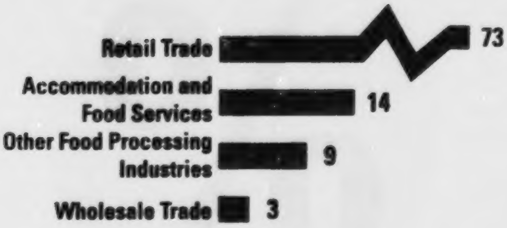
Unemployment Rate

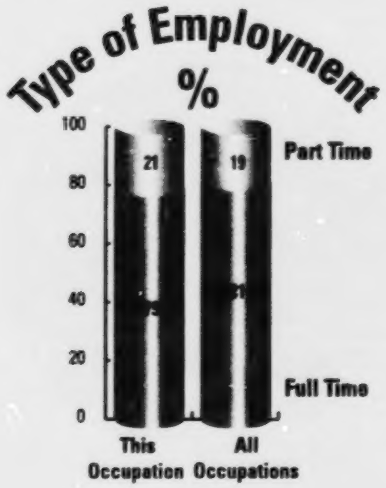


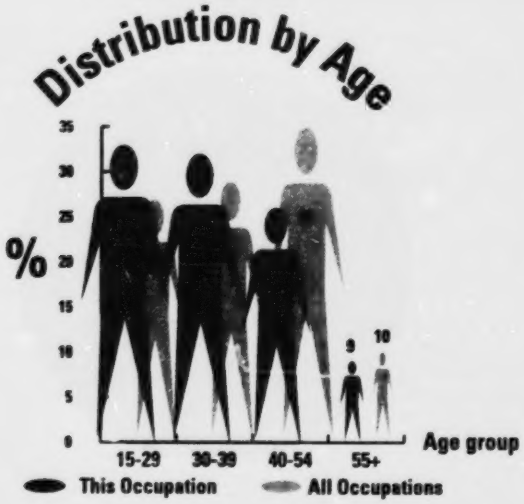
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Butchers and Bakers

Where They Work







At Work

People in this occupational group work in supermarkets, grocery stores, butcher shops, fish stores, bakeries, hotels and restaurants.

- Butchers and meat cutters cut, trim and otherwise prepare and display standard cuts of meat, poultry, fish and shellfish for sale at self-serve counters or directly to customers. They may supervise other butchers and meat cutters and accept customers' payments.
- Bakers prepare and bake bread, rolls, pies, sweet goods, muffins and other items, and frost and decorate cakes. They also purchase supplies, draw up production schedules, hire and train personnel, and may supervise bakery and sales staff.

Education, Training & Experience

- People in this group usually require a high school diploma. Many recent entrants have a high school diploma.
- Butchers and meat cutters may need a college or other program in meat cutting. Food stores usually provide on-the-job training.
- Trade certification for butchers and meat cutters is available, but voluntary, in British Columbia.
- Bakers must usually complete a three- to four-year apprenticeship program or a college or other program for bakers. On-the-job training may be provided.
- Trade certification for bakers is available, but voluntary, in Prince Edward Island, Ontario, Alberta, the Northwest Territories, British Columbia and the Yukon. Qualified bakers may also obtain interprovincial (Red Seal) trade certification for job mobility throughout the country.

Check out the 'big picture' in "World of Work: Overviews and Trends"

In These Occupations...

- 55,000 people were employed in 1998, an increase of 9.0% from 1988. However, after rising 9.2% over the 1988 to 1993 period, employment decreased 0.2% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 60% are bakers and 40% are retail and wholesale butchers and meatcutters.
- 21% work part-time, compared to an average of 19% for all occupations. The proportion of part-time workers in these occupations has increased significantly over the last ten years.
- 5% are self-employed, well below the average of 17% for all occupations.
- 39% are women, compared to an average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 7.9% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for technical, paraprofessional and skilled occupations.
- the average earnings are among the lowest for technical, paraprofessional and skilled occupations but are comparable to those for other occupations in the sales and service sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited", since employment opportunities and earnings are both well below average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Bakers who have completed an apprenticeship program will have better employment opportunities.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the retail trade and accommodation and food services industries.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	42 300	57 600	63 700
Average	31 300	41 900	45 500
Lowest 20%	19 500	25 100	27 000

Age Group

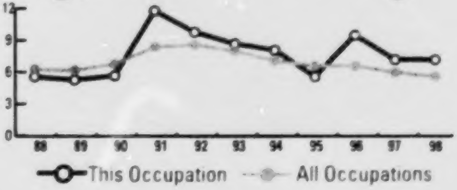
Overall Average for All Ages (15+)

This Occupation	**All Occupations**
30 200	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

Unemployment Rate



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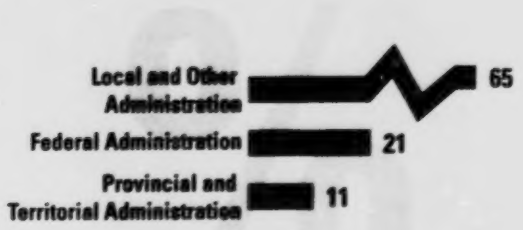
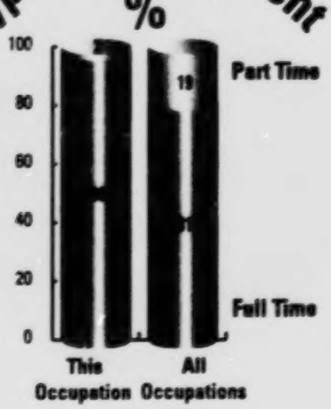
Police Officers and Firefighters

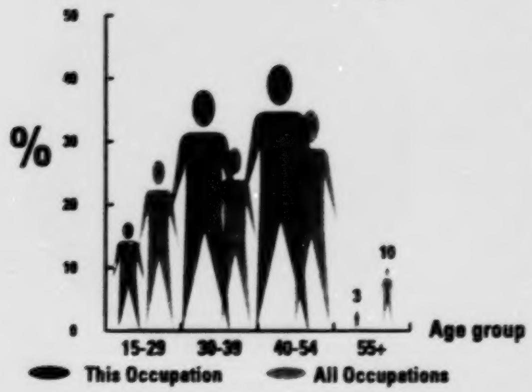
Where They Work



Type of Employment



Distribution by Age



At Work

People in this group are employed by governments, the Canadian Forces and industrial organizations with internal firefighting services.

- Police officers (except commissioned officers) patrol assigned areas to maintain public safety and order and enforce laws and regulations. They investigate crimes and accidents; arrest criminal suspects; and participate in crime prevention, public information, safety programs and other activities. They may supervise and coordinate the work of other police officers.
- Firefighters control and extinguish fires using aerial ladders and hydraulic, manual and other equipment. They rescue victims from burning buildings and industrial, automobile and other accidents, and administer medical aid and other assistance. They also educate the public on fire prevention and monitor prevention through inspections. Fire officers such as captains and lieutenants supervise and coordinate the work of other firefighters.

This occupational group includes municipal, provincial, federal railway and First Nations police as well as municipal, industrial, airport and wild-land firefighters.

Education, Training & Experience

- People in this group must meet physical agility, strength, fitness and vision requirements. Most recent entrants have a community college diploma or an undergraduate university degree.
- Police officers must complete high school and may require a university degree or college program in law and security or the social sciences. Their employers provide a three- to six-month training program. Most recent entrants have a community college diploma or another post-secondary diploma or degree.
- Police detectives and sergeants must have previous experience as constables.
- With additional training and experience, police officers may progress to commissioned police officer positions.
- Firefighters must usually complete high school and may require a college program in fire protection technology or a related field. A firefighter basic training course is usually provided by the employer. Fire officers such as captains and lieutenants must have several years' experience and related training.

Check out the 'big picture' in "World of Work: Overviews and Trends"

- With additional training and experience, firefighters may progress to senior positions such as fire chief.

In These Occupations...

- 85,000 people were employed in 1998, an increase of 6.4% from 1988. However, after rising 8.4% over the 1988 to 1993 period, employment decreased 1.9% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 72% are police officers and 28% are firefighters.
- 2% work part-time, well below the average of 19% for all occupations.
- no workers are self-employed, which is well below the average of 17% for all occupations.
- 9% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 1.1% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for technical, paraprofessional and skilled occupations and for occupations in the sales and service sectors.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations and for occupations in the sales and service sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities and earnings are both well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Continuing spending restrictions in the public sector may decrease demand for police officers and firefighters. However, public demands for increased protective services may limit cutbacks in these areas.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in local public administration.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	53 248	59 896	63 022
Average	43 537	51 900	55 685
Lowest 20%	33 185	45 117	49 573

Age Group

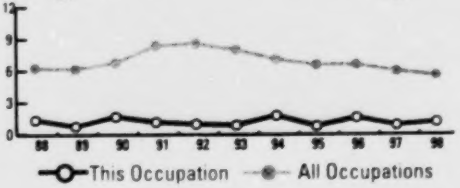
Overall Average for All Ages (15+)

This Occupation	All Occupations
52 481	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

Unemployment Rate



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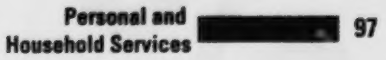
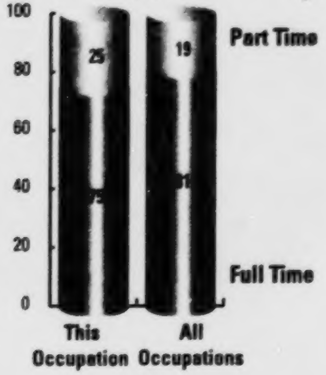
Technical Occupations in Personal Service

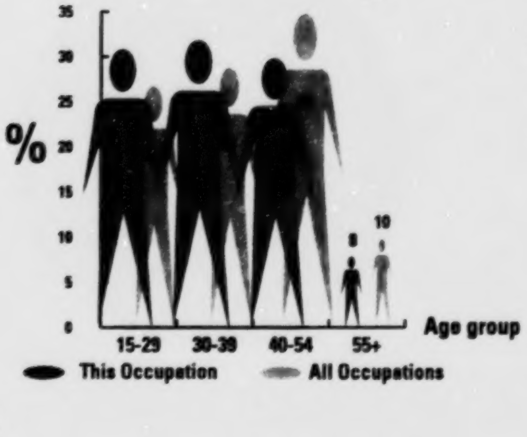
Where They Work



Type of Employment %



Distribution by Age



At Work

People in this group usually work in hairstyling salons; barber shops; vocational schools; hair replacement clinics; health care, theatre, film and television companies; and funeral homes.

- Hairstylists style, cut, curl and perm hair and apply other hair and scalp treatments.
- Barbers cut and trim hair, and shave and style beards and moustaches. They may also wave or tint hair and provide other hair and scalp treatments.
- Funeral directors consult with the family of the deceased regarding arrangement and costs of the funeral service and coordinate all aspects of the funeral.
- Embalmers preserve and prepare human bodies for funeral services, including performing cosmetic and restorative work.

Education, Training & Experience

- People in this group must complete at least some high school. Most recent entrants have a trade/vocational certificate.
- Hairstylists usually require a two- to three-year apprenticeship, or a college or other hairstyling program combined with on-the-job training. Certification and licences vary across the country.
- Barbers usually need a two-year apprenticeship or other barber training program. On-the-job training may replace formal education. Certification and licences vary across the country.
- Funeral directors must usually complete high school, take a year of training with a licensed funeral director and pass a qualifying exam. They must have licences in all provinces except Prince Edward Island and British Columbia. They must usually also be licensed as embalmers in all provinces except Prince Edward Island, Saskatchewan and British Columbia.
- Embalmers usually complete high school and a two-year apprenticeship, and pass a qualifying exam. They require licences in all provinces except British Columbia.

Check out the 'big picture' in "World of Work: Overviews and Trends"

In These Occupations...

- 97,000 people were employed in 1998, an increase of 13.8% from 1988. After declining 1.4% over the 1988 to 1993 period, employment increased 15.4% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 96% are hairstylists and barbers and 4% are funeral directors and embalmers.
- 25% work part-time, compared to an average of 19% for all occupations.
- 48% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 78% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 3.1% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for technical, paraprofessional and skilled occupations and for occupations in the sales and service sectors.
- the average earnings are among the lowest for technical, paraprofessional and skilled occupations and for occupations in the sales and service sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities are well above the average for comparable occupations while earnings are well below the average for all occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- All of the increase in employment requirements through 2004 for these occupations is expected to occur in the personal and household services industry.

Earnings

20 - 29	30 - 39	40 - 49	Age Group
24 200	30 700	30 400	Highest 20%
17 800	21 300	21 400	Average
10 400	11 000	10 200	Lowest 20%

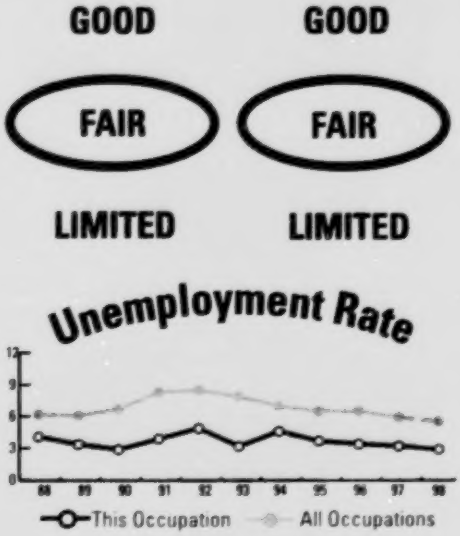
Overall Average for All Ages (15+)

This Occupation	All Occupations
20 400	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate



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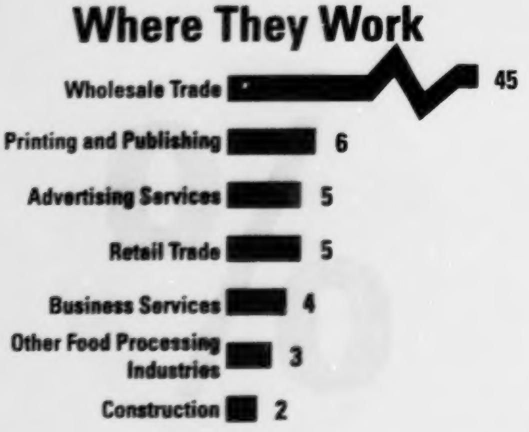
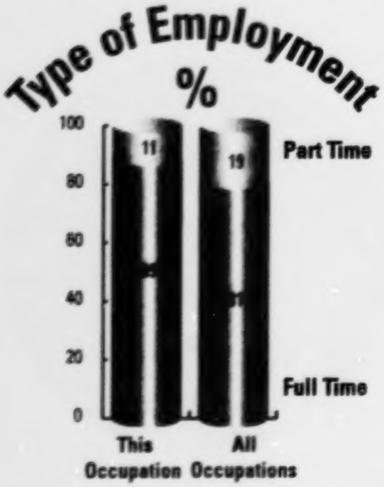
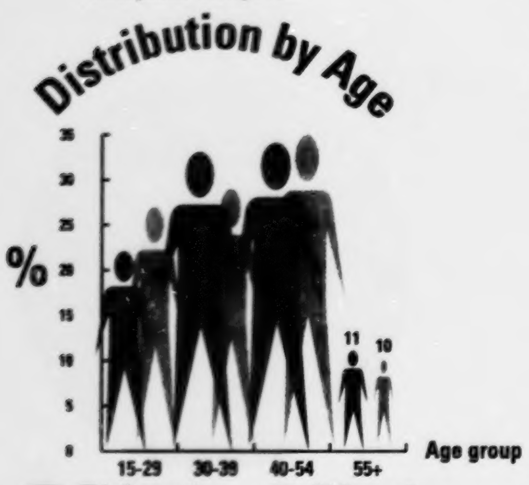
Sales Representatives, Wholesale Trade







At Work

These sales representatives work for wholesalers and for organizations such as petroleum companies; food, beverage and tobacco producers; clothing manufacturers; motor vehicle and parts manufacturers; hotels; business services firms; and transportation companies. Their duties may require them to:

- promote sales of non-technical goods and services to retail, wholesale, commercial, industrial and professional clients;
- deliver presentations to clients regarding the benefits and uses of the goods and services;
- estimate and quote prices, credit terms, warranties and delivery dates;
- prepare or supervise the preparation of contracts;
- consult with clients after sales to resolve problems and provide support; and
- review and respond to information regarding product innovations, competitors and market conditions.

This occupation also includes freight sales agents, food products sales representatives, oil distributors, periodicals and magazine sales representatives, hotel accommodations sales executives, security services sales consultants and graphic design sales representatives.

Education, Training & Experience

- People in this occupational group must have a high school diploma. They may require a college diploma or university degree. Most recent entrants have a post-secondary diploma or degree.
- They usually need experience in sales or in an occupation related to the product or service they are selling.
- With additional training or experience, they may progress to sales management positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

In These Occupations...

- 232,000 people were employed in 1998, an increase of 35.9% from 1988. After employment gains of 14.4% from 1988 to 1993, employment grew 18.8% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 11% work part-time, compared to an average of 19% for all occupations.
- 29% are self-employed, well above the average of 17% for all occupations.
- 30% are women, well below the average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 4.2% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations with similar education/training requirements.
- the average earnings are comparable to those for other occupations with similar education/training requirements and for other occupations in the sales and service sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the wholesale trade industry.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	34 300	47 700	49 600
Average	26 800	35 900	37 600
Lowest 20%	18 000	21 600	20 500

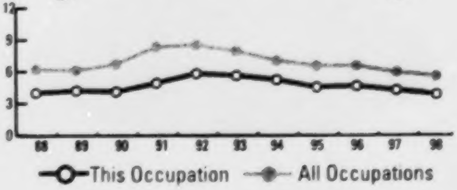
Overall Average for All Ages (15+)

This Occupation	All Occupations
34 300	37 400

Work Prospects

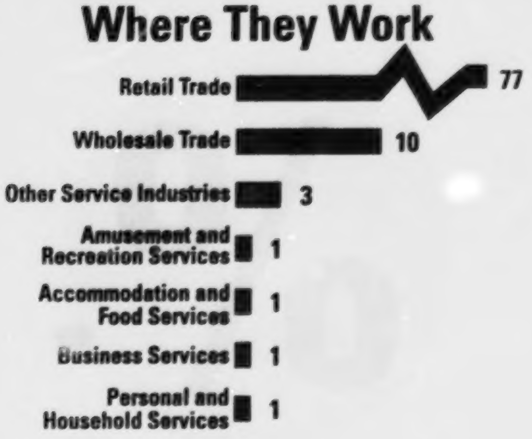
CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

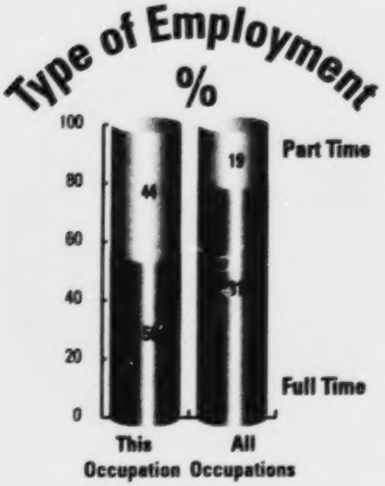
Unemployment Rate

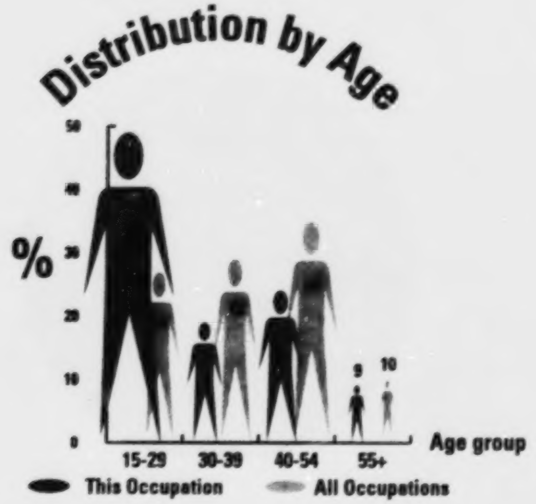


Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Retail Salespersons and Sales Clerks







At Work

People in this occupational group work in a wide variety of retail stores and wholesale businesses that sell on a retail basis to the general public. Their duties may require them to:

- assist customers with purchases of merchandise or rental arrangements;
- provide information and advice on merchandise;
- estimate and quote prices, credit terms, trade-in allowances, warranties and delivery dates;
- prepare sales contracts, and accept cash, cheques, credit cards and automatic debit payments;
- assist in the display of merchandise and other activities; and
- maintain sales records for inventory control.

Education, Training & Experience

- People in this group may be required to have a high school diploma. They often need to be aware of the latest fashions and trends, especially when dealing with young people. Many recent entrants have a high school diploma.
- Retail salespersons are usually required to demonstrate sales ability and product knowledge when selling complex or valuable merchandise such as automobiles, antiques and computers.
- They must be able to work with computers and be prepared to perform such tasks as inventory record keeping, inventory restocking and reordering, and reporting of sales trends among products.
- With experience and additional training, people in this group may progress to retail supervisory positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: T141, U120, C121, C050, C141, T040, C140, C040, C060

NOC 642

In These Occupations...

- 506,000 people were employed in 1998, an increase of 3.5% from 1988. After declining 2.5% over the 1988 to 1993 period, employment increased 6.2% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 44% work part-time, well above the average of 19% for all occupations.
- 4% are self-employed, well below the average of 17% for all occupations.
- 63% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 6.9% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are comparable to those for other occupations with similar education/training requirements and for other occupations in the sales and service sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities are at the average level .
- Over the next five years, the outlook is expected to weaken to "Limited", as the number of qualified recent graduates and non-completers seeking work is expected to exceed the number of job openings in these and related occupations. Job openings are expected to be limited due to slower growth in employment in the retail trade sector and relatively low retirement rates due to the young age distribution in these occupations. While demand weakens, the number of new entrants is expected to continue at or near its current level.
- These occupations often provide labour market entrants with their first paid employment experience.
- Point-of-sales data entry and computerized scanning systems will increasingly be used in the retail sector. Sales personnel will need to be familiar with these technologies.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the retail trade and wholesale trade industries.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	33 100	46 300	49 200
Average	25 300	33 800	34 700
Lowest 20%	15 100	17 600	16 900

Age Group

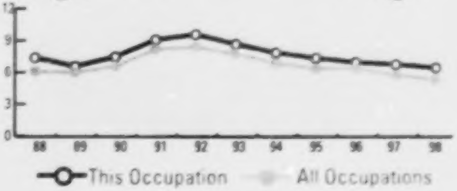
Overall Average for All Ages (15+)

This Occupation	All Occupations
31 600	37 400

Work Prospects

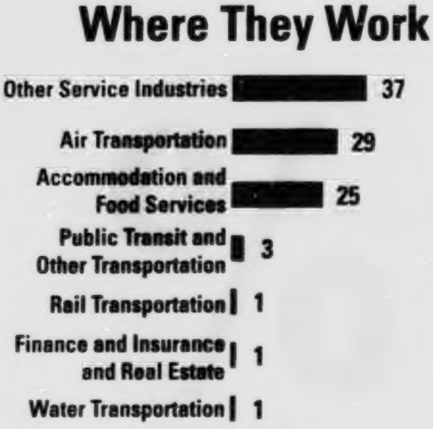
CURRENT	2004
GOOD	GOOD
[✓ FAIR]	FAIR
LIMITED	[✓ LIMITED]

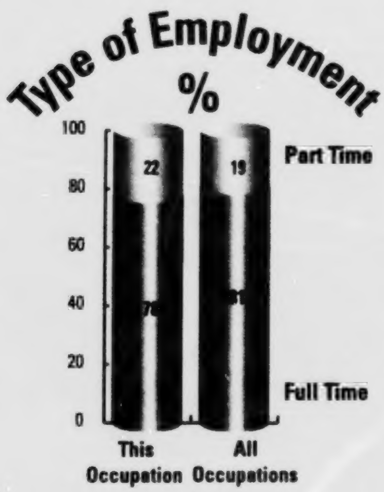
Unemployment Rate

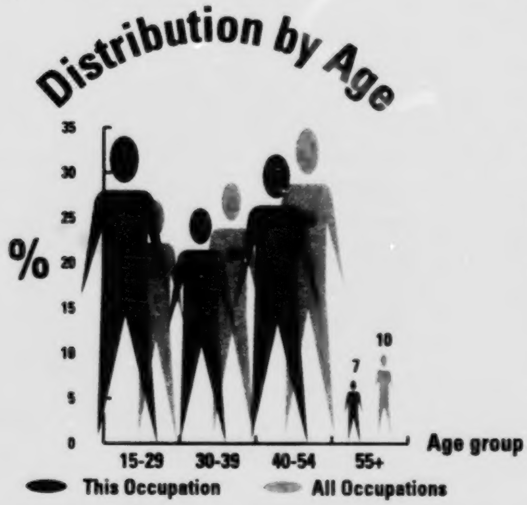


Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Occupations in Travel and Accommodation







At Work

People in these occupations work in travel and tourism agencies; hotels; motels; resorts; airlines; bus, railway and boat companies; steamship lines; travel wholesalers; and other organizations.

- Travel counsellors advise clients on travel options, make reservations, prepare tickets and receive payments.
- Airline pursers and flight attendants ensure the safety and comfort of passengers, serve food and beverages and provide information.
- Ship pursers attend to the safety and comfort of passengers, supervise ship attendants and conduct some business activities.
- Airline reservation and sales agents issue tickets, attend boarding gates, make reservations, trace missing baggage and arrange cargo.
- Airline station agents complete and relay pre-flight data to operational control and down-line stations and perform ticket, baggage and cargo agent duties.
- Airline load planners plan the positioning of cargo on aircraft to distribute and balance the cargo.
- Reservation, sales and cargo agents quote fares and rates, issue tickets, make reservations, process cargo shipments and check baggage for bus, train and marine passengers.
- Hotel front-desk agents perform guest check-in and check-out procedures, provide information and receive payments.

Education, Training & Experience

- In addition to completion of high school, people in these occupations usually require a college diploma, government-approved training or other courses and experience in thair field. They may benefit from occupational certification when available. Most recent entrants have a high school or community college diploma.
- Airline load planners require a restricted radio operator's licence and usually have airline operations experience.

In These Occupations...

- 68,000 people were employed in 1998, an increase of 27.8% from 1988. This reflects an increase of 13.3% from 1988 to 1993 and 12.7% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 6431
Part 2 Field of Study Cross-index: C893, C121, U830, C812, T141

NOC 643

- 37% are travel counsellors; 26% are hotel front desk clerks; 16% are airline sales and service agents; and 15% are pursers and flight attendants.
- 22% work part-time, compared to an average of 19% for all occupations.
- 6% are self-employed, well below the average of 17% for all occupations.
- 74% are women, well above the average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 4.2% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations with similar education/training requirements.
- the average earnings are lower than for other occupations with similar education/training requirements but are comparable to those for other occupations in the sales and service sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities are above average and earnings are below average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Conditions may vary widely among the various occupations in this group.
- The Canadian Tourism Human Resource Council (CTHRC) expects strong employment growth in the tourism industry. According to the CTHRC, conditions in these occupations are good and will remain good through 2004.
- Increasing use of computerized reservation systems and retrieval of information on destinations using the Internet will require persons in these occupations to develop the appropriate skills.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the accommodation industry.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	31 800	39 300	39 800
Average	24 500	29 500	31 100
Lowest 20%	17 200	19 700	19 500

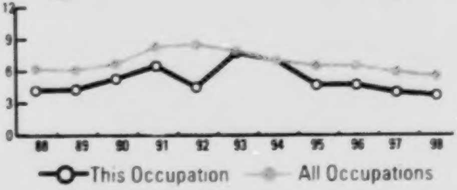
Overall Average for All Ages (15+)

This Occupation	All Occupations
29 300	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

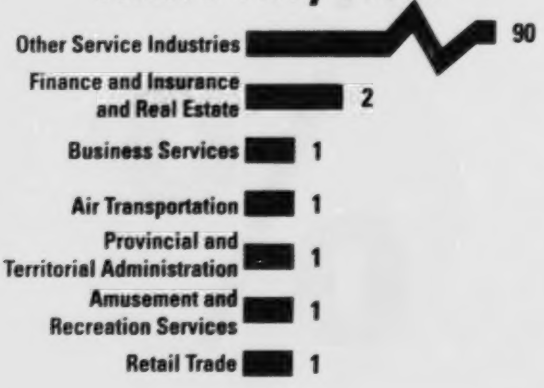
Unemployment Rate

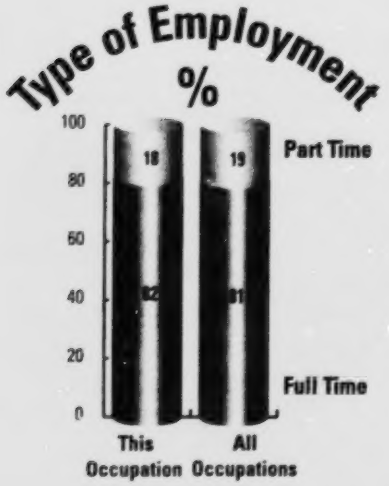


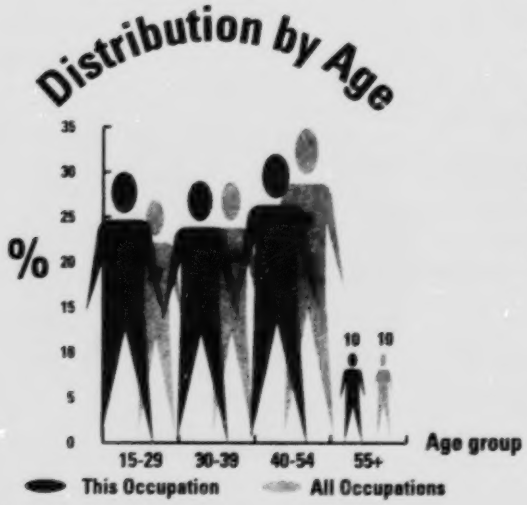
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Travel Counsellors

Where They Work







At Work

Travel counsellors work in travel agencies, hotel chains and transportation and tourism firms. Their duties may require them to:

- provide travel information to individuals and groups regarding destinations, transportation, accommodation and costs;
- make transportation and accommodation reservations using a computerized reservation and ticketing system;
- sell single-fare tickets and packaged tours;
- promote particular destinations, tour packages and other travel services; and
- provide travel tips regarding tourist attractions, foreign currency, customs, languages and travel safety.

Education, Training & Experience

- Travel counsellors must have a high school diploma. Most recent entrants have a community college diploma or a university undergraduate degree.
- They may need to obtain certification with the Canadian Institute of Travel Counsellors (CITC). This certification requires three years' experience and the successful completion of courses and examinations.
- With experience, they may progress to managerial positions.

In These Occupations...

- 25,000 people were employed in 1998, an increase of 65.0% from 1988. After employment gains of 31.5% from 1988 to 1993, employment growth slowed to 25.4% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 18% work part-time, compared to an average of 19% for all occupations.
- 11% are self-employed, compared to an average of 17% for all occupations.
- 83% are women, well above the average of 45% for all occupations. The proportion of women in this occupation has increased significantly over the last ten years.
- the unemployment rate averaged 3.1% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations with similar education/training requirements and for occupations in the sales and service sectors.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 643
Part 2 Field of Study Cross-index: C893, U120, U870

NOC 6431

- the average earnings are lower than those for other occupations with similar education/training requirements and for occupations in the sales and service sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities are well above average but earnings are well below average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- The Canadian Tourism Human Resource Council (CTHRC) expects strong employment growth in the tourism industry over the next five years. According to the CTHRC, conditions in this occupation are good and will remain good through 2004.
- To meet competition in ticket sales from various types of direct sales operations, travel counsellors will need to provide specialized services in travel planning. To do so, they will retrieve information on destination attractions and activities using the Internet and other electronic data access systems. They will also use computerized reservation and booking systems of increasing sophistication. This will require them to develop the appropriate skills.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the services industry.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	30 700	35 200	34 800
Average	24 100	27 600	27 900
Lowest 20%	18 000	19 600	18 000

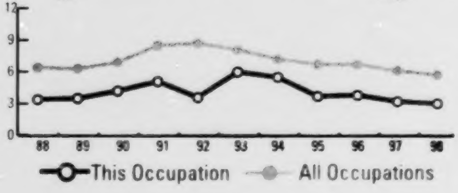
Overall Average for All Ages (15+)

This Occupation	All Occupations
27 000	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

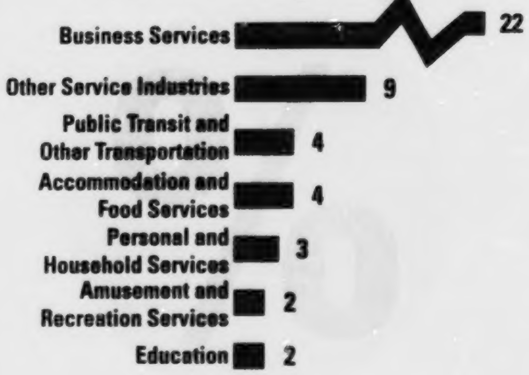
Unemployment Rate



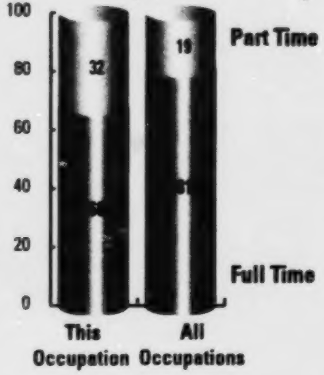
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Tour and Recreational Guides and Amusement Occupations

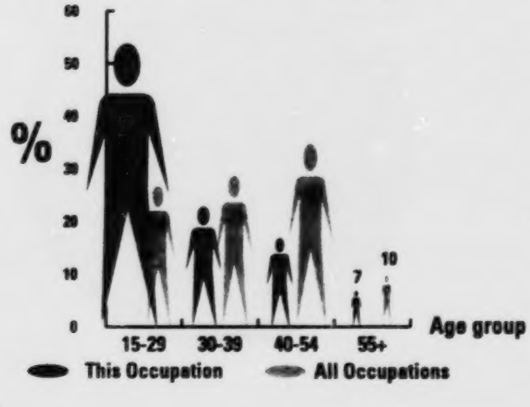
Where They Work



Type of Employment



Distribution by Age



At Work

People in these occupations are employed by tour operators, resorts and private companies.

- Tour guides escort individuals and groups on tours of cities, waterways and other attractions, and may collect admission fees and sell souvenirs.
- Travel guides escort individuals and groups on vacations and business trips, take care of transportation and accommodation reservations and handle travel problems.
- Outdoor adventure and recreation guides organize and conduct trips and expeditions for sports enthusiasts, adventurers, tourists and resort guests.

Education, Training & Experience

- People in these occupations require different educational and training backgrounds. Most recent entrants have a high school or community college diploma.
- Tour and travel guides usually require on-the-job training and may need to be able to speak English and French.
- Outdoor adventure and recreation guides must have knowledge of a particular geographical area and proven ability in their area of recreation - for example, in white water rafting. Professional certification is available for some guiding occupations.
- Hot-air balloon pilots require 10 hours of ground school and 16 hours of pilot-in-command experience. They must be licensed by the federal government.

In These Occupations...

- 23,000 people were employed in 1998, an increase of 77.8% from 1988. This reflects an increase of 22.2% from 1988 to 1993 and 45.6% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 72% are tour and travel guides and 28% are outdoor sport and recreational guides.
- 32% work part-time, well above the average of 19% for all occupations. The proportion of part-time workers in these occupations has decreased significantly over the last ten years.
- 10% are self-employed, compared to an average of 17% for all occupations.
- 36% are women, compared to the average of 45% for all occupations.

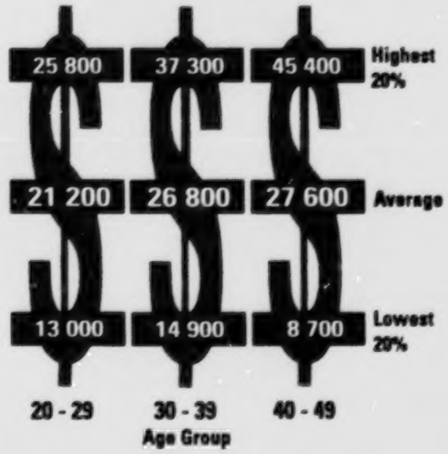
Check out the 'big picture' in "World of Work: Overviews and Trends"

- the unemployment rate averaged 15.3% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for occupations with similar education/training requirements and for occupations in the sales and service sectors.
- the average earnings are lower than those for other occupations with similar education/training requirements and for occupations in the sales and service sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited", since employment opportunities and earnings are both well below average.
- Over the next five years, this outlook is not expected to change, as the number of qualified recent graduates or non-completers seeking work is expected to increase more rapidly than the number of job openings in these and related occupations.
- The Canadian Tourism Human Resource Council (CTHRC) expects strong employment growth in the tourism industry over the next five years. According to the CTHRC, conditions in these occupations currently are fair and will remain fair through 2004.
- Many of the opportunities in this area are in emerging types of tourism, such as eco-tourism, agri-tourism, industrial tourism and adventure tourism.
- Presentation methods for tours will become increasingly sophisticated, using multimedia and virtual reality techniques. Customers are now highly knowledgeable and seek new and unique experiences. This will increase the skill requirements for guides and tour directors, particularly computer skill requirements.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the services sector and accommodation industry.

Earnings



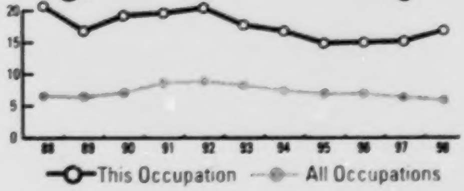
Overall Average for All Ages (15+)

This Occupation	All Occupations
26 200	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

Unemployment Rate



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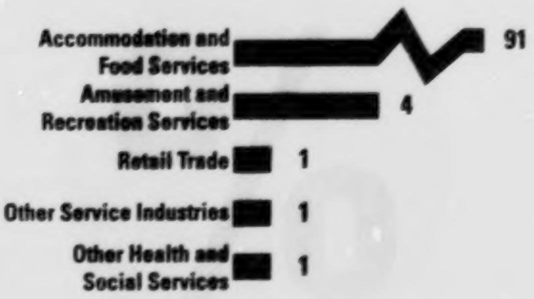
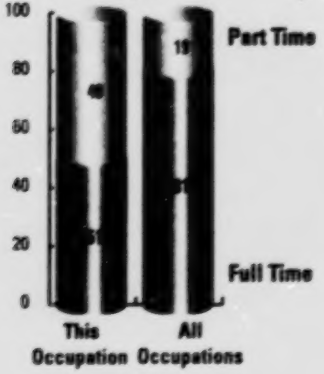
Occupations in Food and Beverage Service

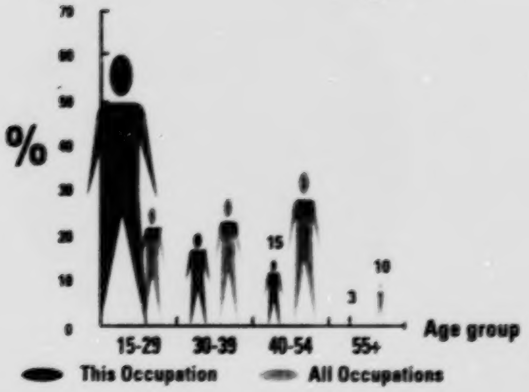
Where They Work



Type of Employment



Distribution by Age



At Work

People in these occupations work in restaurants, hotel dining rooms, private clubs, cocktail lounges, bars, taverns, banquet halls and licensed and other establishments.

- Maîtres d'hôtel, hosts and hostesses take reservations, greet and escort patrons to tables, attend to complaints and requests and accept payments. They also train, supervise and coordinate food and beverage servers and other serving staff.
- Bartenders prepare cocktails and other drinks for waiters and waitresses or serve drinks directly to patrons and collect payments. They also maintain an inventory of bar supplies and may supervise other bartenders and bar staff.
- Waiters and waitresses present menus, take patrons' orders and serve food and beverages. They accept payments and may recommend wines and prepare and serve specialty foods at patrons' tables. Wine stewards suggest, present and serve wines in formal settings.

Education, Training & Experience

- People in these occupations may require a high school diploma. Many recent entrants have a high school diploma.
- Maîtres d'hôtel, hosts and hostesses usually require several weeks' on-the-job training.
- Maîtres d'hôtel require experience as formal or captain waiters and waitresses, or other food service experience.
- Bartenders usually require a college or other bartending program, or courses in mixing drinks.
- Waiters and waitresses may require on-the-job training. Formal waiters and waitresses may require college or vocational school courses.
- Wine stewards may require courses in wine selection and service or experience as formal or captain waiters and waitresses.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: C812, T811

NOC 645

In These Occupations...

- 259,000 people were employed in 1998, an increase of 18.6% from 1988. This reflects an increase of 9.8% from 1988 to 1993 and 8.0% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 76% are food and beverage servers; 17% are bartenders; and 7% are maîtres d'hôtel and hosts/hostesses.
- 49% work part-time, well above the average of 19% for all occupations. The proportion of part-time workers in these occupations has increased significantly over the last ten years.
- 1% are self-employed, well below the average of 17% for all occupations.
- 76% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 9.0% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for occupations in the sales and service sectors.
- the average earnings are among the lowest for occupations with similar education/training requirements and for occupations in the sales and service sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited", since employment opportunities and earnings are well below average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Increased use of computerized ordering and billing systems will reduce this component of these workers' jobs, increasing the time available to devote to providing service.
- Almost all of the increase in employment requirements through 2004 for these occupations is expected to occur in the accommodation and food service industry.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	26 500	31 700	34 700
Average	19 800	23 300	24 400
Lowest 20%	11 800	13 600	13 500

Age Group

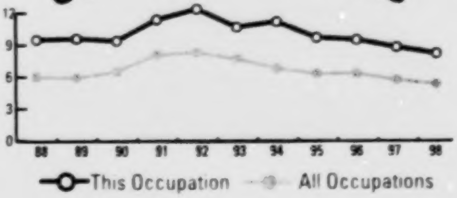
Overall Average for All Ages (15+)

This Occupation	All Occupations
23 000	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

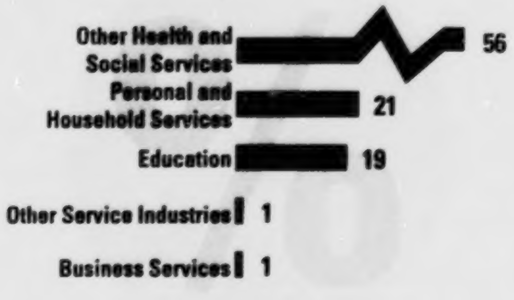
Unemployment Rate



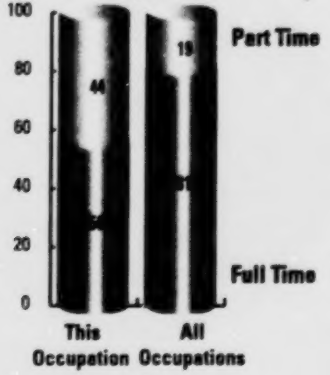
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Child Care and Home Support Workers

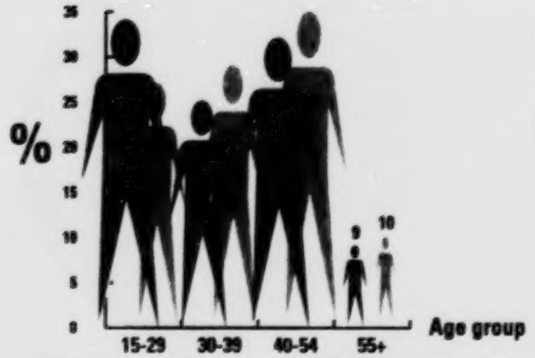
Where They Work



Type of Employment



Distribution by Age



At Work

People in this group work in government and non-profit agencies; home-care, foster-parent and babysitting agencies; health care institutions; embassies; private households; public and private nursery, elementary and high schools; and daycare centres. They may also be self-employed.

- Visiting homemakers provide support services during periods of illness or other problems.
- Housekeepers perform housekeeping duties, prepare meals and may provide child care.
- Companions provide companionship and personal care to the elderly and those recovering from illness.
- Early childhood educators plan and organize activities for preschool children and encourage their intellectual, physical and emotional growth.
- Early childhood educator assistants and elementary and high school teacher assistants, under supervision, help with lessons, outings and other activities, and assist special-needs students with mobility, communication and personal hygiene.

This occupational group also includes babysitters, parents' helpers, nannies and other live-in caregivers.

Education, Training & Experience

- People in this group usually have some high school education. Many recent entrants have a high school or community college diploma.
- They may need college or other courses in child care, home management and support, and first aid.
- They may require experience and have to demonstrate ability in their area of work.
- Early childhood educators require a university degree or college diploma in early childhood education or a university degree in education.
- Elementary and high school teacher assistants usually need a high school diploma. They may require specialized training and experience with special-needs students.

In These Occupations...

- 299,000 people were employed in 1998, an increase of 26.2% from 1988. After employment gains of 10.0% from 1988 to 1993, employment grew 14.7% from 1993 to 1998. In

Check out the 'big picture' in "World of Work: Overviews and Trends"

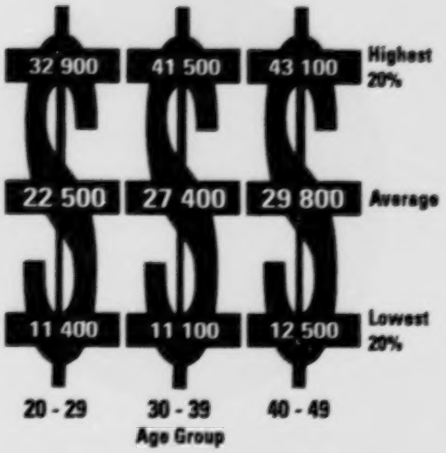
comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.

- 39% are babysitters and nannies; 24% are early childhood educators and assistants; 20% are visiting homemakers; and 17% are teachers' assistants.
- 45% work part-time, well above the average of 19% for all occupations.
- 43% are self-employed, well above the average of 17% for all occupations.
- 94% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 7.3% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the lowest for occupations with similar education/training requirements and for occupations in the sales and service sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities are average, although earnings are below the average level for all occupations.
- Over the next five years, the outlook is expected to weaken to "Limited". Rapid growth in the number of qualified job seekers, due essentially to a large number of recent graduates or non-completers seeking work, is expected to mean that job seekers will outnumber job openings, despite significant employment growth in these occupations.
- However, government decisions regarding levels of support for child care, the provision of pre-kindergarten schooling and whether early childhood educators or teachers will teach kindergarten and pre-kindergarten will be crucial factors in determining the demand for workers in this occupation.
- An aging population will increase the demand for home-care workers.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the personal and household services and health and social services industries.

Earnings



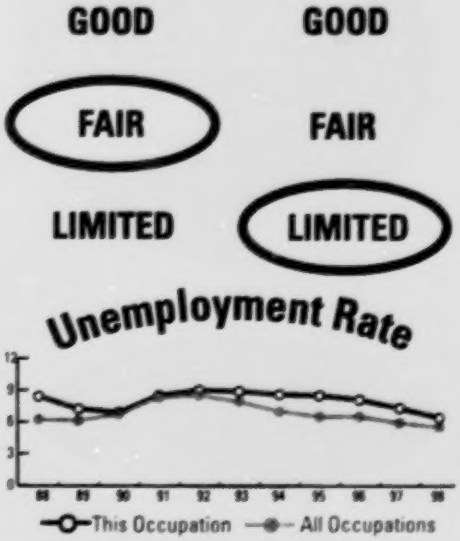
Overall Average for All Ages (15+)

This Occupation	All Occupations
28 000	37 400

Work Prospects

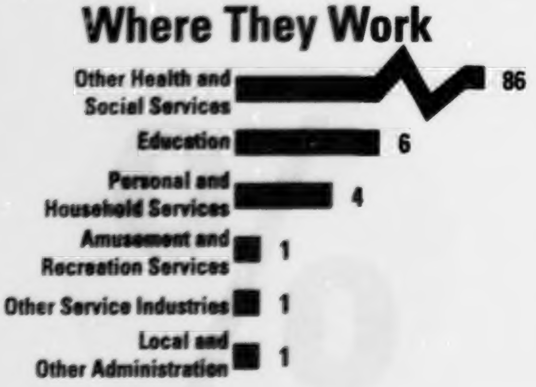
CURRENT	2004
GOOD	GOOD
[✓ FAIR]	FAIR
LIMITED	[✓ LIMITED]

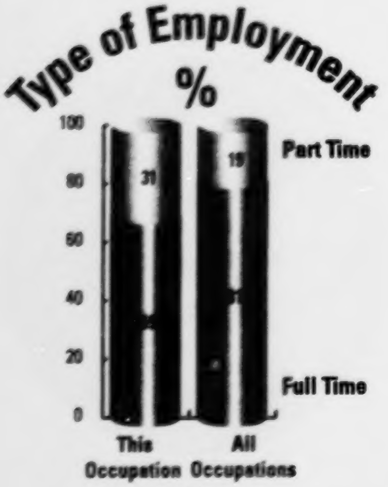
Unemployment Rate

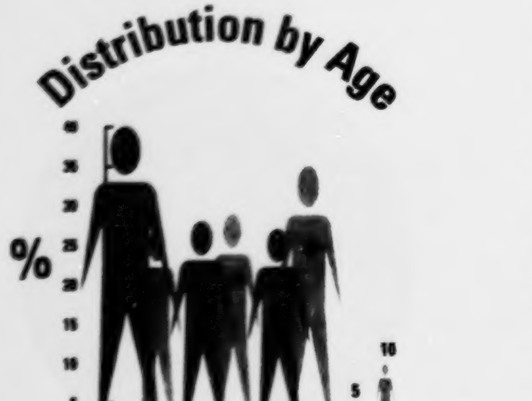


Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Early Childhood Educators and Assistants







At Work

People in this occupation work in daycare centres and nursery schools. They may also be self-employed.

- Early childhood educators plan, organize and lead activities for preschool children that are designed to encourage intellectual, physical and emotional growth. They observe children for signs of learning disabilities or emotional problems, and discuss progress or problems with parents and staff members.
- Early childhood educator assistants take care of preschool children under the supervision of early childhood educators. They also maintain daycare equipment and assist in housekeeping duties.

Education, Training & Experience

- People in this occupation need different educational levels, depending on their position. Most recent entrants have a community college diploma or an undergraduate university degree.
- Early childhood educators usually require a bachelor's degree or college diploma in early childhood education or a bachelor's degree in education.
- With experience, early childhood educators may progress to senior positions such as daycare supervisor.
- Early childhood educator assistants usually have a high school diploma and require experience in child care.

In These Occupations...

- 72,000 people were employed in 1998, an increase of 69.6% from 1988. After employment gains of 33.5% from 1988 to 1993, employment growth slowed to 27.0% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 31% work part-time, well above the average of 19% for all occupations.
- 38% are self-employed, well above the average of 17% for all occupations.
- 96% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 7.1% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are comparable to other occupations with similar education/training requirements and to other occupations in the sales and service sectors.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 647
Part 2 Field of Study Cross-index: C210, U230, U250, U870

NOC 6470

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", as employment opportunities and earnings are both at average levels.
- Over the next five years, the outlook is expected to weaken to "Limited". A large influx of recent graduates looking for work in this occupation is expected to lead to rapid growth in the number of qualified job seekers. As a result, despite significant growth in employment opportunities, the number of job seekers is expected to exceed the number of job openings.
- However, government decisions regarding levels of support for child care, the provision of pre-kindergarten schooling and whether early childhood educators or teachers will teach kindergarten and pre-kindergarten will be crucial factors in determining the demand for workers in this occupation.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the health and social services industry.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	35 500	47 700	49 300
Average	25 600	31 600	33 800
Lowest 20%	15 300	14 400	16 900

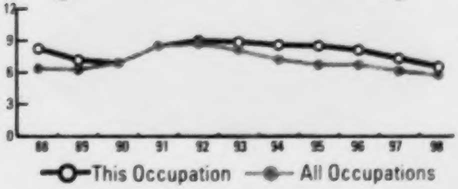
Overall Average for All Ages (15+)

This Occupation	All Occupations
31 800	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	FAIR
LIMITED	[✓ LIMITED]

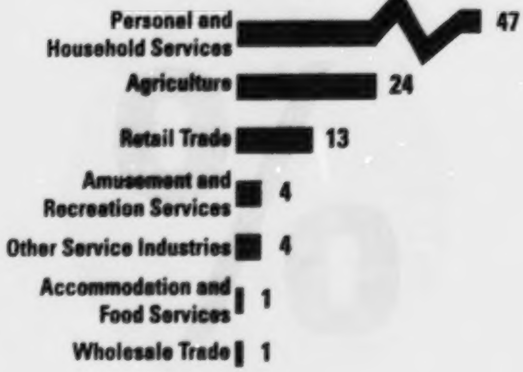
Unemployment Rate



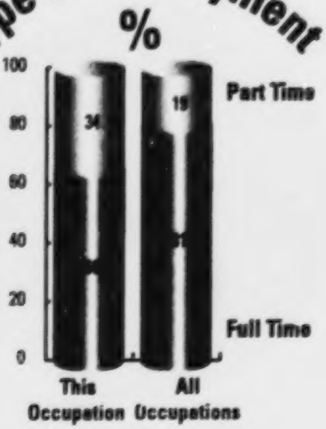
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Other Occupations in Personal Services

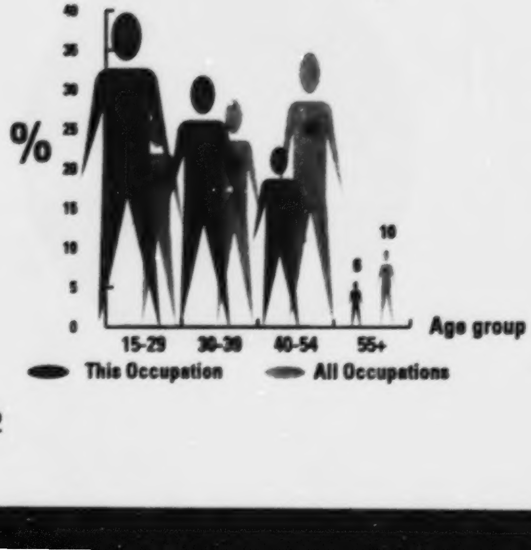
Where They Work



Type of Employment



Distribution by Age



At Work

People in this group work in beauty salons, fashion boutiques, modelling schools, image consulting companies, electrolysis studios, scalp treatment clinics, animal hospitals and clinics, animal shelters, kennels, zoos, pet grooming service companies, laboratories, and for psychic consultants and fortune telling, astrological and similar services. They may also be self-employed.

- Image consultants provide advice to improve their clients' general appearance, posture and manner.
- Estheticians administer facial and other skin treatments.
- Electrologists remove unwanted hair permanently using specialized electrical equipment.
- Manicurists and pedicurists clean, shape and polish fingernails and toenails.
- Tattoo artists apply permanent designs to clients' skin.
- Pet groomers and animal care workers feed, handle, train and groom animals and assist veterinarians and other animal care workers.

This occupational group also includes etiquette and wedding consultants; wardrobe and make-up consultants; public speaking consultants; weight loss consultants; beauty treatment operators; cosmeticians; dog trainers; kennel, veterinary and zoo attendants; and fortune tellers.

Education, Training & Experience

- People in this group usually must have a high school diploma. Many recent entrants have a trade/vocational certificate or a community college diploma.
- They usually need specialized or on-the-job training.
- Beauty treatment operators and manicurists in Manitoba require provincial licences.
- Skin care specialists and manicurists in Nova Scotia require provincial licences.

Check out the 'big picture' in "World of Work: Overviews and Trends"

NOC 648

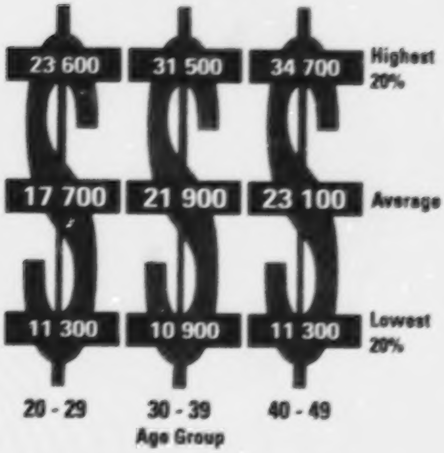
In These Occupations...

- 34,000 people were employed in 1998, an increase of 42.9% from 1988. After employment gains of 22.4% from 1988 to 1993, employment growth slowed to 16.8% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 49% are estheticians and electrologists and 37% are pet groomers and animal care workers.
- 34% work part-time, well above the average of 19% for all occupations.
- 44% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 87% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 5.5% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the lowest for occupations with similar education/training requirements and for occupations in the sales and service sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited", since earnings are well below average, although employment opportunities are at the average level.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Use of computers for product presentation and information retrieval will require that these workers develop the necessary skills.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the personal and household services industry.

Earnings



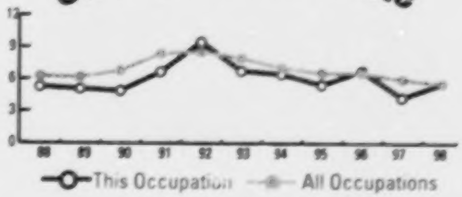
Overall Average for All Ages (15+)

26 100	37 400
This Occupation	All Occupations

Work Prospects

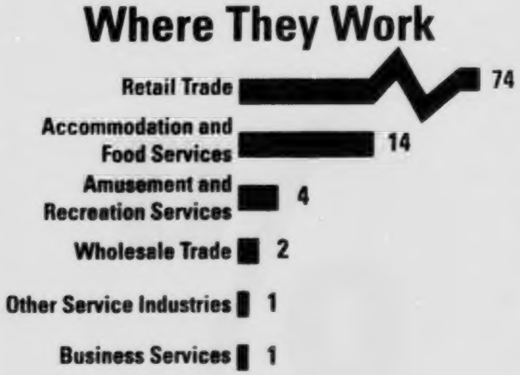
CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

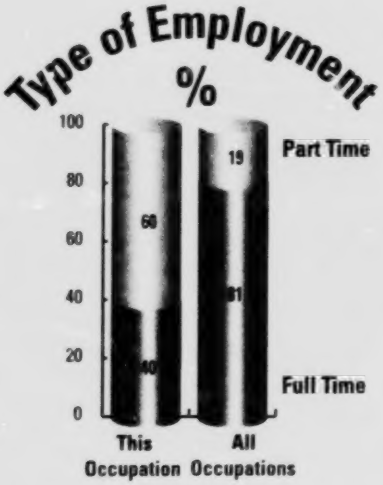
Unemployment Rate

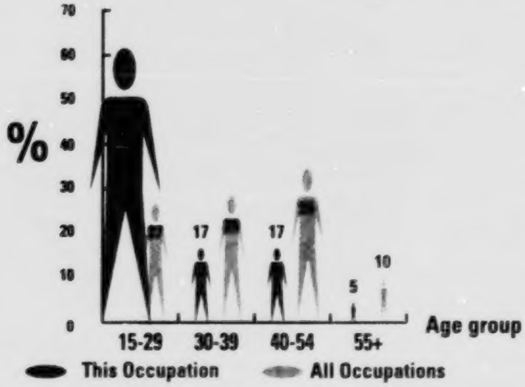


Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Cashiers







At Work

Cashiers work in stores, restaurants, theatres, government and other business offices, self-serve gas bars and other organizations throughout the private sector. Their duties may require them to:

- establish or identify the price of goods, services and admission fees;
- total bills using calculators, cash registers and optical price scanners;
- receive payment in cash or by cheque, credit card and automatic debit;
- wrap or place merchandise in bags;
- provide information to customers; and
- calculate and record total sales received on completion of their work shift.

Education, Training & Experience

- Casniers usually require some high school education. Most recent entrants have a high school or community college diploma.
- They may have to be eligible for bonding, that is, be able to prove to an employer that they can hold a position of trust so that the employer can insure a cashier's services against any losses he or she might incur.
- With additional training or experience, they may progress to supervisory positions such as head cashier.

In These Occupations...

- 241,000 people were employed in 1998, an increase of 13.7% from 1988. After employment gains of 8.7% from 1988 to 1993, employment growth slowed to 4.7% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 60% work part-time, well above the average of 19% for all occupations. The proportion of part-time workers in these occupations has increased significantly over the last ten years.
- 1% are self-employed, well below the average of 17% for all occupations.
- 87% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 7.1% from 1996 to 1998, compared to the national average of 6.0%. This rate is

Check out the 'big picture' in "World of Work: Overviews and Trends"

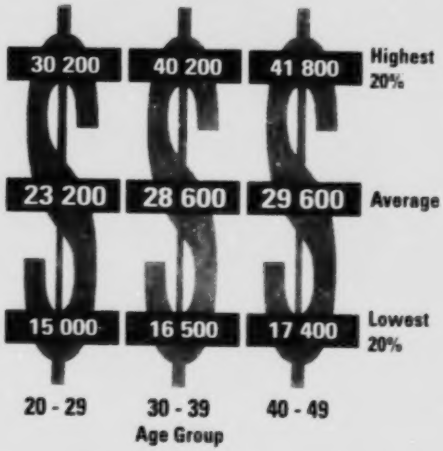
among the lowest for occupations with similar education/training requirements.

- the average earnings are comparable to those for other occupations with similar education/training requirements but are among the lowest for occupations in the sales and service sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities are average, although earnings are below the average level for all occupations.
- Over the next five years, the outlook is expected to weaken to "Limited". A large influx of recent graduates or non-completers looking for work in these occupations is expected to lead to rapid growth in the number of qualified job seekers. As a result, despite significant growth in employment opportunities, the number of job seekers is expected to exceed the number of job openings.
- The adoption of electronic scanning systems will require new skills, which will be learned on-the-job for the most part.
- Automated checkout systems and the growth of electronic and mail order sales may decrease labour demand in these occupations.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the retail trade and accommodation and food services industries.

Earnings



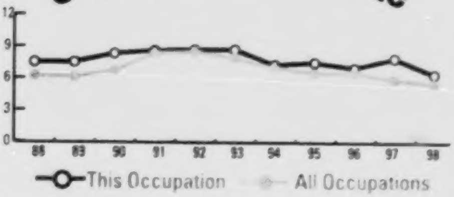
Overall Average for All Ages (15+)

27 700	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	FAIR
LIMITED	[✓ LIMITED]

Unemployment Rate



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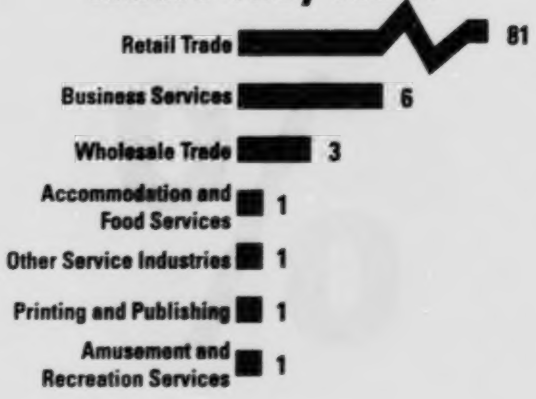
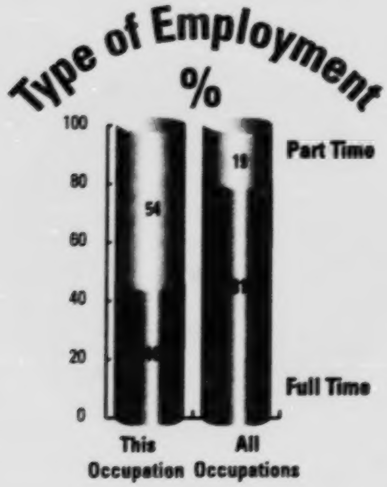
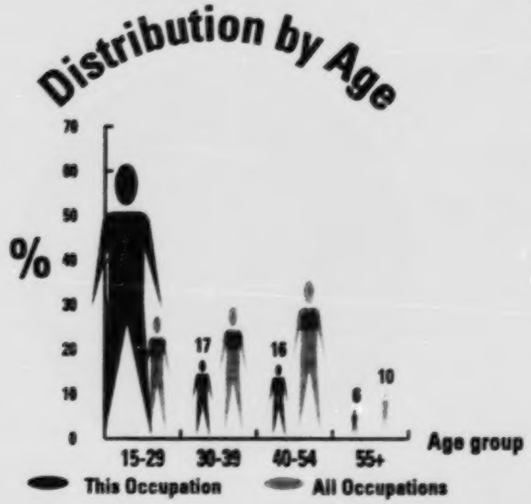
Other Sales and Related Occupations

Where They Work







At Work

People in this group work in service stations; marinas; grocery, hardware and department stores; mail order warehouses; and a wide range of retail and wholesale organizations.

- Automotive service station attendants refuel vehicles; perform minor service and maintenance such as checking and replacing motor oil, window washing fluid and air in tires; and receive payments.
- Marina service station attendants refuel boats, pump boats' septic systems, rent boats and equipment, receive payments and maintain dock area and marina facilities.
- Grocery clerks and shelf stockers bag and box customers' purchases, carry purchases to customers' vehicles, price items, and stock shelves and display areas.
- Direct distributors and door-to-door salespersons sell merchandise in private homes.
- Street vendors set up, display and sell merchandise on sidewalks and at public events.
- Demonstrators show, describe and sell goods and services in retail and other organizations, at exhibitions and trade shows, and in private homes.

This occupational group also includes order fillers, warehouse stock pickers, canvassers and telephone solicitors and telemarketers.

Education, Training & Experience

- People in this group usually must have some high school education. Most recent entrants have a high school or community college diploma.
- Propane and natural gas pump attendants may require an operator's licence.
- Self-employed street vendors and door-to-door salespersons may require municipal merchants' permits.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: C121, C841, T812, T141

NOC 662

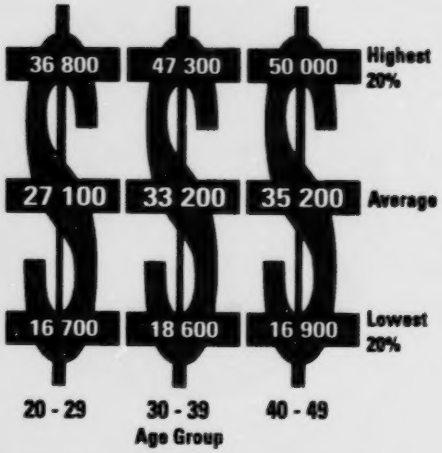
In These Occupations...

- 195,000 people were employed in 1998, an increase of 17.0% from 1988. After employment gains of 5.8% from 1988 to 1993, employment grew 10.6% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 54% are grocery clerks and shelf stockers and 19% are service station attendants.
- 54% work part-time, well above the average of 19% for all occupations. The proportion of part-time workers in these occupations has increased significantly over the last ten years.
- 13% are self-employed, compared to an average of 17% for all occupations.
- 36% are women, compared to an average of 45% for all occupations.
- the unemployment rate averaged 8.8% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for occupations in the sales and service sectors.
- the average earnings are among the highest for occupations with similar education/training requirements and are comparable to those for other occupations in the sales and service sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities are below average and earnings are above the average level for comparable occupations.
- Over the next five years, the outlook is expected to weaken to "Limited". A large influx of recent graduates or non-completers looking for work in these occupations is expected to lead to rapid growth in the number of qualified job seekers. As a result, despite significant growth in employment opportunities, the number of job seekers is expected to exceed the number of job openings.
- Computerization of product-line information and of systems to record transactions will require that workers in these occupations develop the appropriate skills.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the retail trade industry.

Earnings



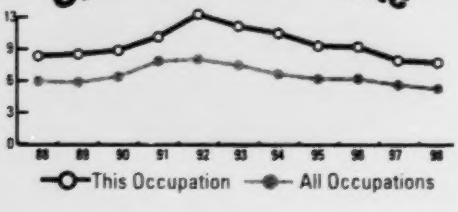
Overall Average for All Ages (15+)

This Occupation	All Occupations
31 700	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	FAIR
LIMITED	[✓ LIMITED]

Unemployment Rate



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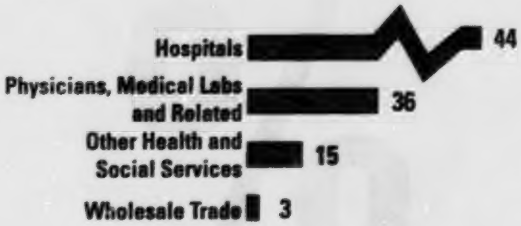
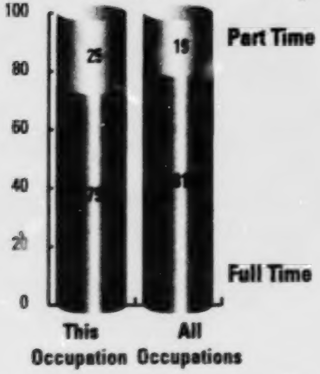
Elemental Medical and Hospital Assistants

Where They Work

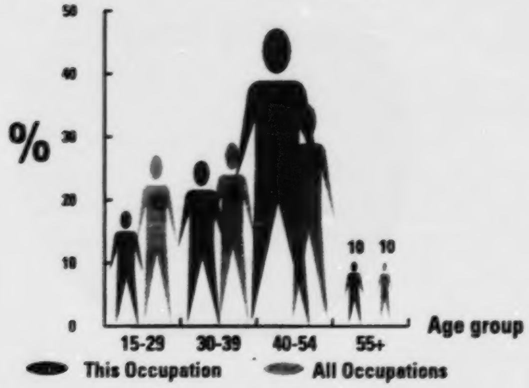


Type of Employment

%



Distribution by Age



At Work

These assistants work in hospitals and other health care institutions, medical clinics and offices of health care professionals such as chiropractors, occupational therapists and physiotherapists.

- Blood donor clinic assistants set up equipment, maintain supplies, monitor donors under the supervision of a registered nurse and label donated blood.
- Central supply aides collect and sort soiled supplies and instruments from hospital departments; operate machines to clean, reprocess and sterilize these supplies; and assemble packs of sterile supplies and instruments.
- Chiropractic aides assist elderly and incapacitated patients, position them for treatments and connect treatment machines as directed by chiropractors. They may perform clerical duties.
- Occupational therapy assistants prepare and maintain work materials and supplies. They may assist patients in crafts and other activities as directed by occupational therapists.
- Physiotherapy assistants take patients to treatment rooms, clean equipment, change linen and assist patients in the use of equipment and maintenance programs as directed by physiotherapists.

Education, Training & Experience

- These assistants need some high school education. Many recent entrants have a community college diploma.
- They require on-the-job training.
- Some employers may require health care courses or short-term college programs related to their area of work.

Check out the 'big picture' in "World of Work: Overviews and Trends"

In These Occupations...

- 9,000 people were employed in 1998, an increase of 41.8% from 1988. After employment gains of 30.4% from 1988 to 1993, employment growth slowed to 8.7% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 25% work part-time, compared to an average of 19% for all occupations.
- 7% are self-employed, compared to an average of 17% for all occupations.
- 83% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 3.6% from 1996 to 1998, compared to the national average of 6.0% This rate is among the lowest for occupations with similar education/training requirements and for occupations in the sales and service sectors.
- the average earnings are among the highest for occupations with similar education/training requirements and are comparable to those for other occupations in the sales and service sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities and earnings are both above the average levels for comparable occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Restructuring of the health care system is likely to decrease demand for these workers in acute care hospitals but increase demand in extended care facilities.
- The introduction of certification in areas of these occupations will increase the importance of continuous learning.
- Computer skills will become more important as more sophisticated patient record and office management systems are introduced.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in private health practices and medical laboratories and in hospitals.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	37 000	42 800	47 900
Average	29 200	36 200	39 500
Lowest 20%	18 600	28 200	30 300

Age Group

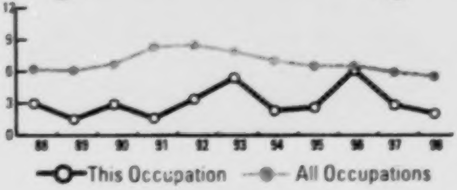
Overall Average for All Ages (15+)

This Occupation	All Occupations
35 300	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

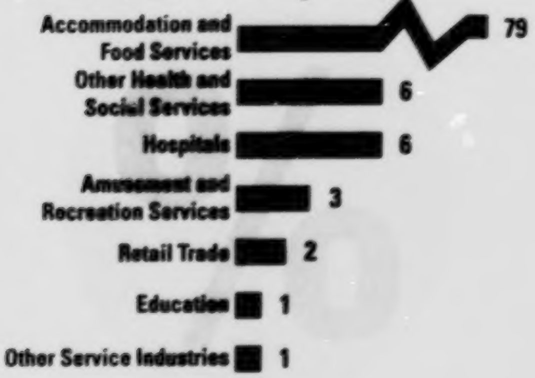
Unemployment Rate



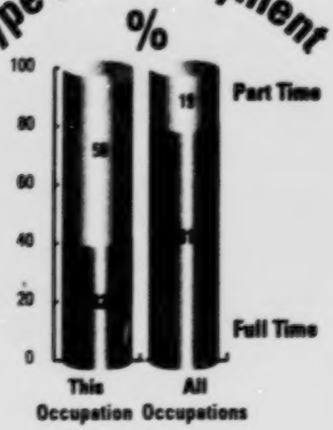
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Food Counter Attendants and Kitchen Helpers

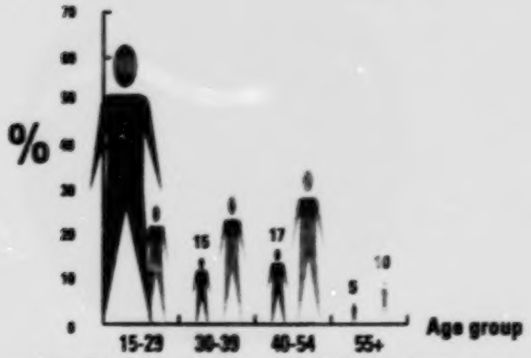
Where They Work



Type of Employment



Distribution by Age



At Work

People in this group work in cafeterias, fast food outlets, restaurants, hotels, hospitals and other organizations.

- Food service counter attendants and food preparers take customers' orders; prepare sandwiches, hamburgers, salads, milkshakes and similar items; serve customers at counters and buffet tables; and may receive payment for items purchased. They also heat or finish cooking partially cooked foods received from central food commissaries.
- Kitchen helpers wash and peel vegetables and fruit; wash work tables and appliances; clean kitchen refuse containers; unpack and store supplies; sweep and mop floors; and assist cooks and kitchen staff.
- Food service helpers clean tables and trays; take dishes, flatware and other items to serving areas to set tables; replenish condiments and other supplies; and perform other duties such as scraping and stacking dishes and running errands.
- Dishwashers operate dishwashers or wash dishes, glassware, flatware, pots and pans by hand; store dishes; and may clean and polish silverware.

This occupational group also includes fast food preparers, salad bar attendants, sandwich makers, bartender helpers, bus boys/girls and cook's helpers.

Education, Training & Experience

- People in this group may require some high school education. Many recent entrants have a high school diploma.
- They may get on-the-job training.
- With further training and experience, they may move into other occupations in food preparation and service such as cook and waiter.

Check out the 'big picture' in "World of Work: Overviews and Trends"

In These Occupations...

- 236,000 people were employed in 1998, an increase of 10.6% from 1988. This reflects an increase of 4.4% from 1988 to 1993 and 6.0% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 54% are food service counter attendants and 46% are kitchen and food service helpers.
- 58% work part-time, well above the average of 19% for all occupations. The proportion of part-time workers in these occupations has increased significantly over the last ten years.
- 1% are self-employed, well below the average of 17% for all occupations.
- 64% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 8.8% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for occupations in the sales and service sectors.
- the average earnings are among the lowest for occupations with similar education/training requirements and for occupations in the sales and service sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited", since employment opportunities and earnings are both well below average.
- Over the next five years, this outlook is not expected to change, as the number of qualified recent graduates or non-completers seeking work is expected to increase more rapidly than the number of job openings.
- Increasing computerization in kitchens - for example, for recipe retrieval and inventory control - will require that these workers acquire appropriate skills.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the accommodation and food services industry.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	28 000	35 600	37 400
Average	21 100	25 400	26 900
Lowest 20%	13 400	14 500	15 300
		Age Group	

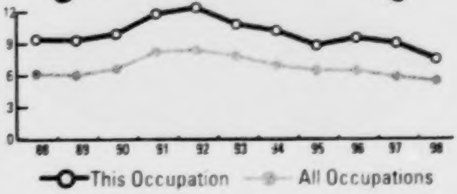
Overall Average for All Ages (15+)

This Occupation	All Occupations
24 600	37 400

Work Prospects

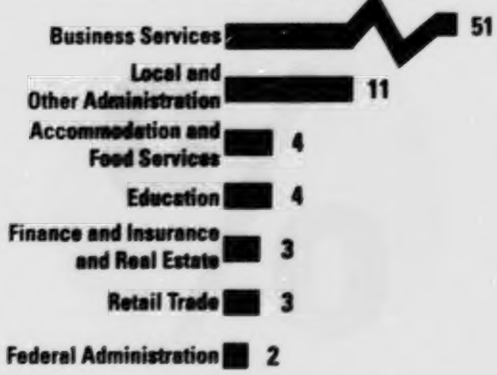
CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

Unemployment Rate

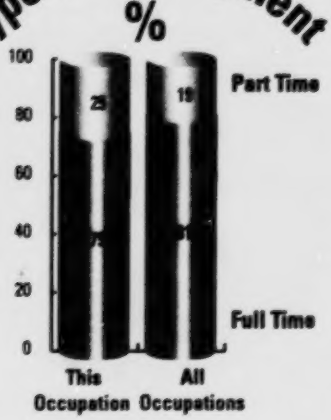


Security Guards and Related Occupations

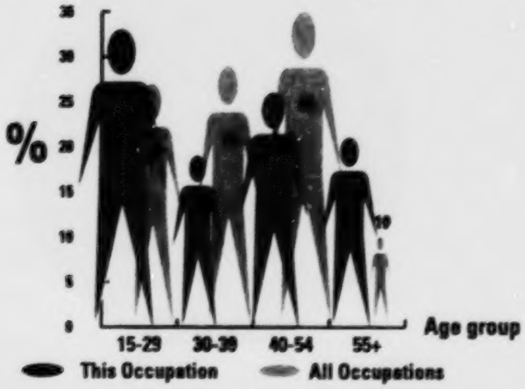
Where They Work



Type of Employment



Distribution by Age



At Work

People in this occupation work in private security agencies, retail stores, industrial establishments, museums and other organizations. Their duties may require them to:

- issue passes to control access to facilities and direct visitors to appropriate areas;
- patrol assigned areas to guard against theft, shoplifting, vandalism and fire;
- enforce regulations to maintain order at public events;
- perform airport security checks of passengers and luggage;
- drive and guard armoured trucks and deliver cash and valuables to banks, automated teller machines and retail organizations; and
- supervise and coordinate the activities of other security guards.

This occupation also includes gate attendants, bodyguards, bouncers, commissionaires and crossing guards.

Education, Training & Experience

- People in this occupation usually need a high school education. Many recent entrants have a community college diploma.
- Airport security guards are given training by their employers. Security guards employed by the federal government must be trained to Canadian General Standards Board standards. People in other security and guarding occupations may also get training.
- Security guards carrying firearms require a gun licence.
- Armoured car drivers need driver's licences.
- With experience, they may progress to senior security guards and supervisors.

Check out the 'big picture' in "World of Work: Overviews and Trends"

In These Occupations...

- 81,000 people were employed in 1998, an increase of 15.2% from 1988. Most of the growth occurred from 1993 to 1998, when employment increased 12.1%. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 25% work part-time, compared to an average of 19% for all occupations.
- 2% are self-employed, well below the average of 17% for all occupations.
- 22% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 7.6% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are comparable to those for other occupations with similar education/training requirements and for other occupations in the sales and service sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities are average and earnings are below the average level for all occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Electronic surveillance systems will increasingly replace gatekeeper security guards. More and more, the work of security guards will require skills related to the use of these computer systems and to their maintenance and operation.
- Reduced government spending on police forces and a rising fear of crime may increase demand for security guards.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the business services industry.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	28 762	36 409	39 469
Average	21 910	26 815	28 234
Lowest 20%	14 306	16 963	17 166

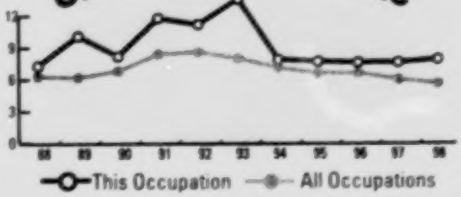
Overall Average for All Ages (15+)

This Occupation	All Occupations
25 394	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

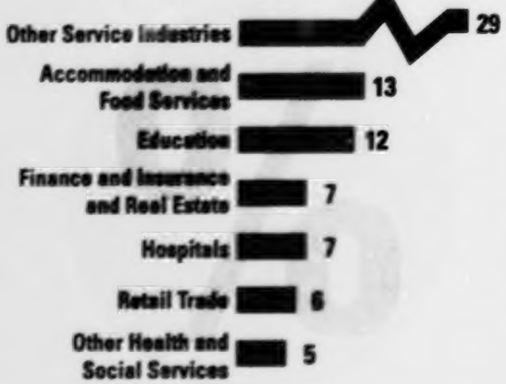
Unemployment Rate



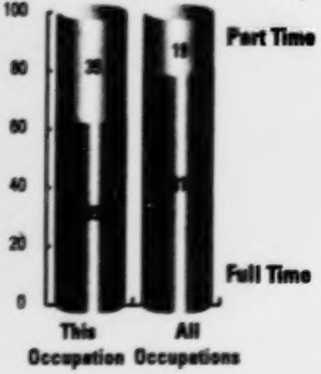
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Cleaners

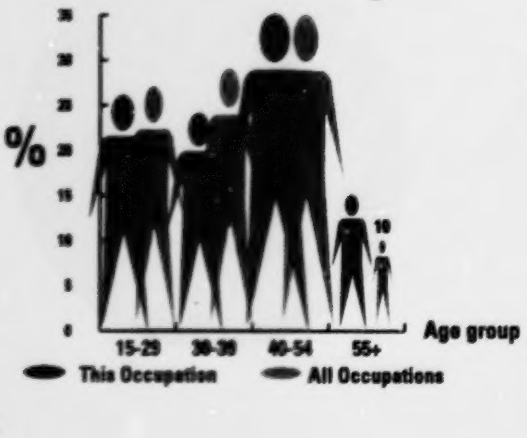
Where They Work



Type of Employment



Distribution by Age



At Work

These cleaners work for hotels, motels, hospitals and other health care institutions, school boards, and office and apartment building management and cleaning service companies, and in recreational facilities, shopping malls and private residences.

- Light duty cleaners clean hotels, motels, schools and private residences. They make beds, change linen, clean and disinfect kitchens, bathrooms, operating rooms and other hospital areas.
- Chimney cleaners operate industrial vacuum cleaners and use hand tools to clean chimneys and fireplaces.
- Furnace and ventilation system cleaners clean furnace filters, ducts and vents.
- Sandblasters operate sandblasting, pressurized steam and hydroblasting equipment to clean building exteriors, tanks and industrial equipment.
- Vehicle cleaners operate equipment, or work by hand, to clean the interiors and exteriors of automobiles and trucks.
- Janitors, caretakers and building superintendents clean and maintain the interiors and exteriors of buildings and surrounding grounds. They may advertise vacancies, show apartments and offices to prospective tenants, and collect rents.

This occupational group also includes window washers, carpet and upholstery cleaners, cleaners of septic tanks and freight cars, custodians, industrial cleaners and plant cleaners.

Education, Training & Experience

- These cleaners may require a high school diploma. Many recent entrants have a high school or community college diploma.
- Light and specialized cleaners do not need any formal education. They usually get on-the-job training and may need experience in specialized cleaning activities.
- Janitors, caretakers and building superintendents may need previous cleaning and maintenance experience.
- With additional training and experience, they may progress to supervisory positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

In These Occupations...

- 387,000 people were employed in 1998, an increase of 11.1% from 1988. This reflects an increase of 5.1% from 1988 to 1993 and 5.7% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 60% are janitors and building superintendents and 33% are light duty cleaners.
- 35% work part-time, well above the average of 19% for all occupations.
- 15% are self-employed, compared to an average of 17% for all occupations.
- 45% are women, equal to the average of women employed for all occupations.
- the unemployment rate averaged 8.5% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for occupations in the sales and service sectors.
- the average earnings are among the lowest for occupations with similar education/training requirements and for occupations in the sales and service sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited", since earnings are well below average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Employment requirements for these occupations are expected to increase across a broad range of industries through 2004, with much of the increase in the accommodation and food services industry.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	30 700	37 100	41 100
Average	22 200	27 300	30 500
Lowest 20%	12 400	15 700	17 700

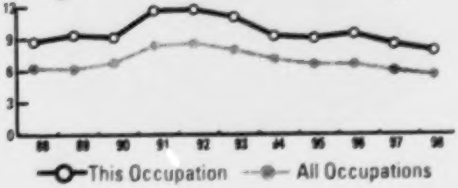
Overall Average for All Ages (15+)

This Occupation	All Occupations
25 100	37 400

Work Prospects

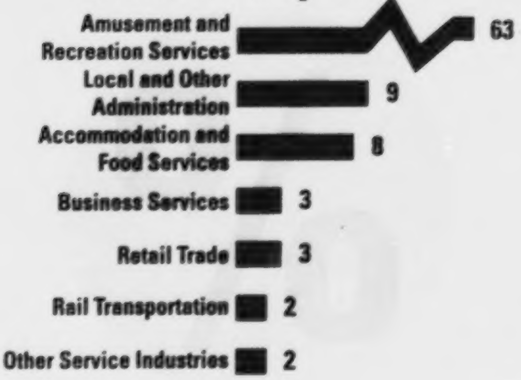
CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

Unemployment Rate

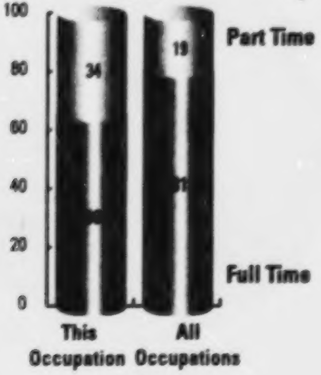


Other Attendants in Travel, Accommodation and Recreation

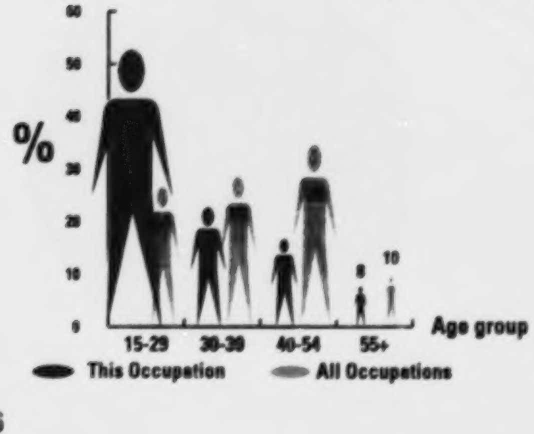
Where They Work



Type of Employment %



Distribution by Age



At Work

These attendants work for amusement parks, fairs, arenas, billiard parlours, gambling casinos, bowling alleys, golf courses, ski centres, tennis clubs and other recreational and sports facilities, hotels, and railway and water transport companies.

- Amusement park attendants collect tickets, assist patrons on and off rides, and secure and release safety belts and bars.
- Amusement attraction operators transport rides, games and attractions to amusement sites, set up attractions and operate rides.
- Ice makers operate machines and prepare ice surfaces of rinks for hockey games and other activities.
- Recreational facility attendants schedule the use of golf courses, tennis courts, fitness clubs and other recreational facilities. They may collect fees and sell and rent sports equipment.
- Bellhops carry luggage for hotel and resort guests, escort them to their rooms, ensure that the rooms are in order and provide information on hotel services and local points of interest.
- Baggage porters carry travellers' luggage by hand or use handcarts, and arrange for ground transportation.
- Ship attendants serve food and beverages, clean cabins, make beds and carry passengers' luggage.
- Train service attendants set and clear dining car tables, clean sleeping cars and assist passengers.

This occupational group also includes ski lift and bowling alley attendants, hotel doorkeepers, redcaps, athletic equipment custodians and attendants of campgrounds, bingo halls, tennis courts and other recreational facilities.

Education, Training & Experience

- People in this group may require some high school education. Most recent entrants have a high school or community college diploma.

Check out the 'big picture' in "World of Work: Overviews and Trends"

NOC 667

In These Occupations...

- 18,000 people were employed in 1998, an increase of 53.2% from 1988. This reflects an increase of 22.0% from 1988 to 1993 and 25.5% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 88% are attendants in amusement and recreation services.
- 34% work part-time, well above the average of 19% for all occupations.
- 4% are self-employed, well below the average of 17% for all occupations.
- 30% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 12.9% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for occupations in the sales and service sectors.
- the average earnings are comparable to those for other occupations with similar education/training requirements but are among the lowest for occupations in the sales and service sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited", since employment opportunities and earnings are both well below average.
- Over the next five years, this outlook is not expected to change, as the number of qualified recent graduates or non-completers seeking work is expected to increase more rapidly than the number of job openings.
- The growth of casinos and casino resorts may increase employment requirements in these occupations.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the amusement and recreation services industry.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	31 100	40 400	44 800
Average	23 300	29 900	31 800
Lowest 20%	14 300	17 700	18 900

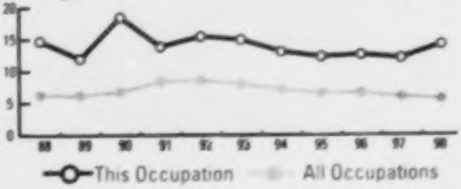
Overall Average for All Ages (15+)

This Occupation	All Occupations
27 700	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

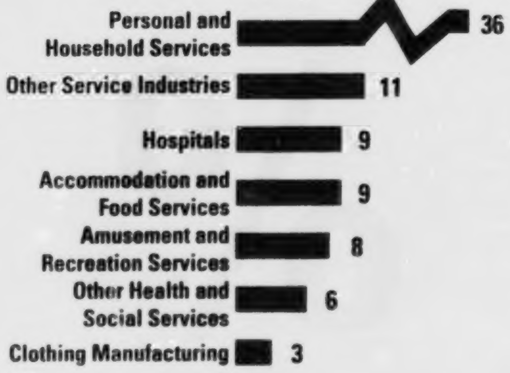
Unemployment Rate



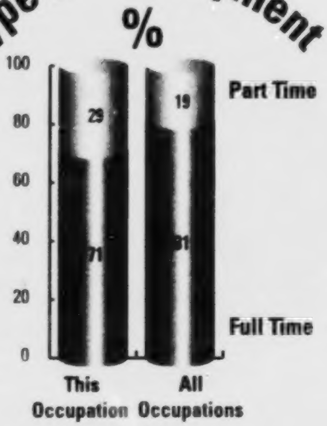
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Other Elemental Service Occupations

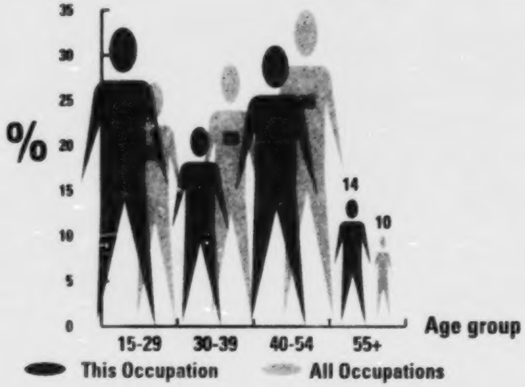
Where They Work



Type of Employment



Distribution by Age



At Work

People in this group work in dry cleaning and laundry businesses, hotel and health care institutions and a wide range of retail organizations.

- Dry cleaning operators use machines to clean suits, sweaters, draperies, cushion covers and other garments and household articles. They may specialize in cleaning leather and suede garments.
- Dry cleaning and laundry inspectors check garments to make sure they meet appropriate standards.
- Ironing, pressing and finishing workers operate pressing and ironing machines and hand-iron fine lace or silk items.
- Beauty salon attendants shampoo customers' hair and assist hairstylists.
- Door attendants assist persons entering and leaving facilities.
- Ticket takers and ushers receive admission tickets at events.
- Funeral attendants drive hearses, arrange floral displays and perform other related duties.

This occupational group also includes fur cleaning operators, laundry machine operators and attendants, and parking lot attendants.

Education, Training & Experience

- People in this group usually require some high school education. Most recent entrants have a high school or community college diploma.
- People in dry cleaning, laundry, ironing and pressing occupations usually require on-the-job training and may need experience as inspectors or assemblers.
- Dry cleaners in British Columbia may have to complete a one-year apprenticeship.
- Suede, leather and fur cleaners may need experience as dry cleaning or laundry machine operators.
- Funeral attendants and car jockeys require driver's licences.

Check out the 'big picture' in "World of Work: Overviews and Trends"

In These Occupations...

- 48,000 people were employed in 1998, a decrease of 10.0% from 1988. After rising 0.3% over the 1988 to 1993 period, employment decreased 10.2% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 46% work in dry cleaning and laundry occupations.
- 29% work part-time, well above the average of 19% for all occupations.
- 6% are self-employed, well below the average of 17% for all occupations.
- 51% are women, compared to an average of 45% for all occupations.
- the unemployment rate averaged 7.8% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the lowest for occupations with similar education/training requirements and for occupations in the sales and service sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited" as a result of large long-term employment losses.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Use new of technology, such as computer-controlled equipment, and environmental concerns may affect the skills required for these occupations.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the personal and household services industry.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	31 600	33 800	38 700
Average	23 300	24 400	28 900
Lowest 20%	14 500	14 800	17 500

Age Group

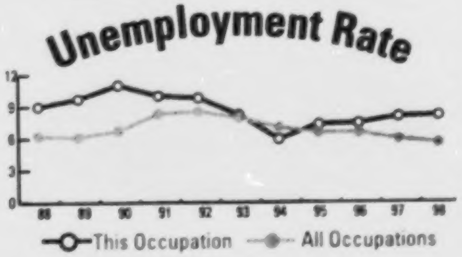
Overall Average for All Ages (15+)

This Occupation	All Occupations
24 600	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

Unemployment Rate



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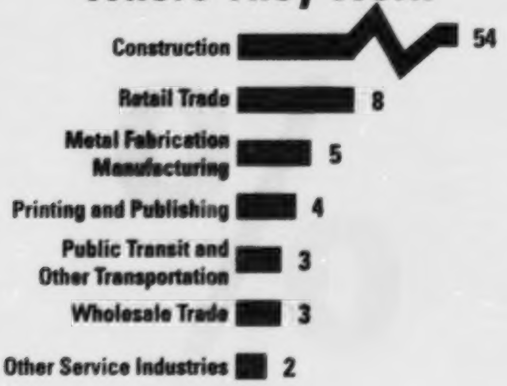
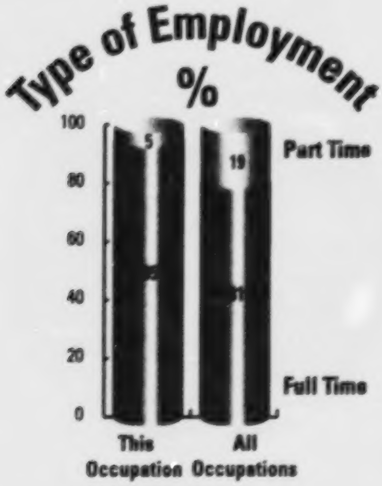
Contractors and Supervisors, Trades and Related Workers

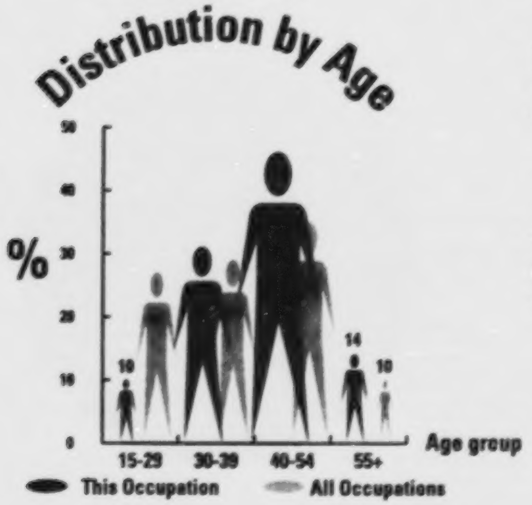
Where They Work



Type of Employment



Distribution by Age



At Work

These contractors and supervisors work in machine shops and in companies involved in structural metal, platework and metal products manufacturing, fabrication and erecting, construction, and printing and publishing; for trade contractors; and for a wide range of organizations. They supervise, coordinate and schedule the activities of the following workers:

- machinists, machining and tooling inspectors, and tool and die makers;
- electricians, electrical power line and cable workers, telecommunications line and cable workers and installation and repair workers, and cable television service and maintenance technicians;
- plumbers, steam fitters, pipefitters, sprinkler system installers and gas fitters;
- sheet metal workers, boilermakers, structural metal and platework fabricators and fitters, ironworkers, skilled welders, blacksmiths and die setters;
- carpenters and related workers;
- machinery and transportation equipment, motor vehicle and other mechanics;
- crane operators; drillers and blasters in surface mining, quarrying and construction; heavy equipment operators; longshore workers; public works maintenance equipment operators; railway track maintenance workers; and water well drillers;
- workers who produce camera work, printing plates and cylinders; process film; print text and illustrations; and bind and finish printed products; and
- masons, plasterers, construction workers, installers, repairers and servicers.

Education, Training & Experience

- These contractors and supervisors usually require a high school diploma. Many recent entrants have a trade/vocational certificate or a community college diploma.
- They need several years' experience as a qualified tradesperson in a relevant trade.
- They may require provincial trade certification.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: C350, C331, U360, T362, T332

NOC 721

In These Occupations...

- 189,000 people were employed in 1998, an increase of 11.7% from 1988. After employment gains of 11.1% from 1988 to 1993, employment growth slowed to 0.6% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- these supervisors oversee workers in a wide variety of trades.
- 5% work part-time, well below the average of 19% for all occupations.
- 60% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 5% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 3.6% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations in the trades, transport and equipment operation sectors.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations and for other occupations in the trades, transport and equipment operation sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities are well above average, although earnings are at the average level.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to exceed the number of qualified job seekers.
- New techniques and increasing skill requirements in many trades mean that these supervisors will need a corresponding increase in skills.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the construction industry.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	40 400	53 500	55 600
Average	31 200	40 400	43 300
Lowest 20%	20 200	25 000	27 600

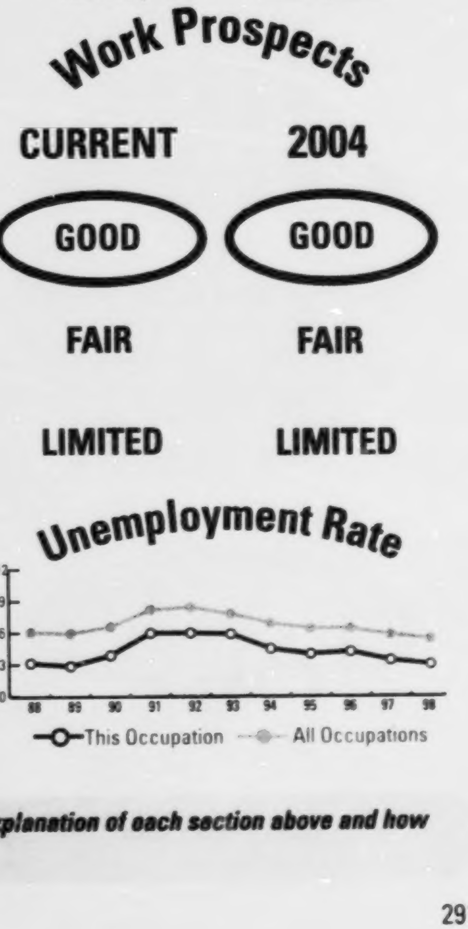
Overall Average for All Ages (15+)

This Occupation	All Occupations
37 800	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

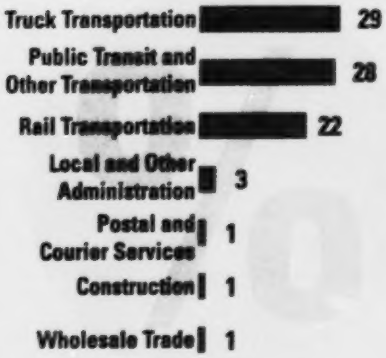
Unemployment Rate

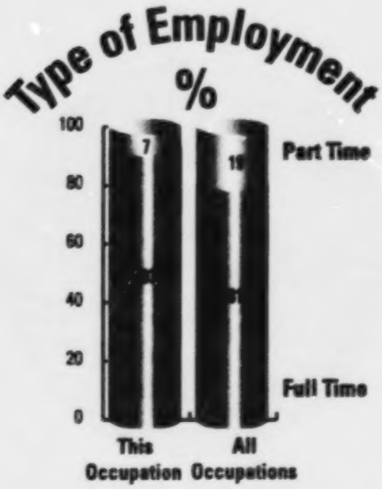


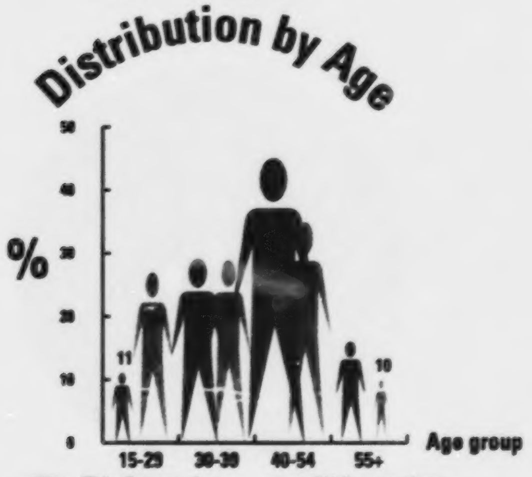
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Supervisors, Railway and Motor Transportation Occupations

Where They Work







At Work

These supervisors work for government, railway, motor transportation and ground transit companies.

- Supervisors of railway transport operations supervise, coordinate and schedule the activities of workers who operate trains, drive locomotives in railway yards and perform other duties related to railway operations. They also train staff in job duties, safety procedures and company policy.
- Supervisors of motor transport and other ground transit operators supervise, coordinate and schedule the activities of workers who operate trucks, buses, subway trains, light rail transit, taxicabs and other transport vehicles.
- Bus dispatchers dispatch bus drivers and monitor routes to make sure that drivers meet schedules. They also resolve operating problems.
- Subway traffic controllers operate and monitor signal and track switch control panels.

Education, Training & Experience

- These supervisors usually must have a high school diploma. Many recent entrants have a high school diploma.
- They usually require several years' experience in their industry, either in railway operations or as drivers of motor transport or ground transport equipment.
- Supervisors in railway transport operations require various railway operating certificates.

Check out the 'big picture' in "World of Work: Overviews and Trends"

In These Occupations...

- 28,000 people were employed in 1998, an increase of 21.4% from 1988. After employment gains of 12.3% from 1988 to 1993, employment growth slowed to 8.2% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 75% work in motor transport and other ground transport and 25% work in railway transport operations.
- 7% work part-time, well below the average of 19% for all occupations.
- 7% are self-employed, well above the average of 17% for all occupations.
- 9% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 2.1% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for technical, paraprofessional and skilled occupations and for occupations in the trades, transport and equipment operation sectors.
- the average earnings are comparable to other technical, paraprofessional and skilled occupations and to other occupations in the trades, transport and equipment operation sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities are well above average, although earnings are at the average level.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- The increasing importance of electronic tracking systems will require these supervisors to develop information system skills.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the public transit and truck transportation industries.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	32 900	57 700	57 600
Average	24 900	43 400	45 800
Lowest 20%	17 800	29 700	31 800

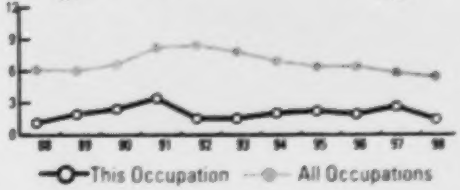
Overall Average for All Ages (15+)

This Occupation	All Occupations
37 400	37 400

Work Prospects

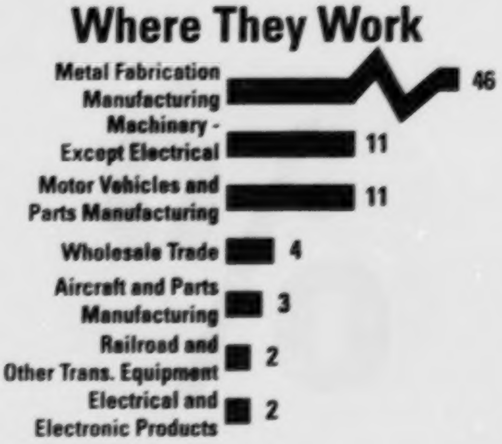
CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

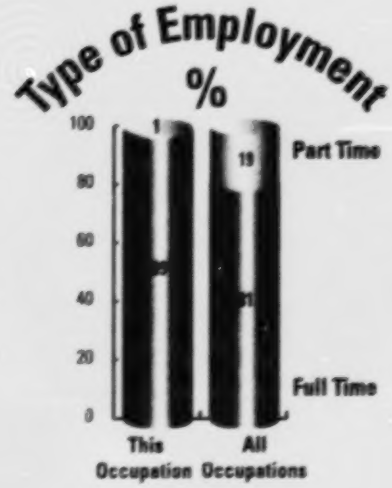
Unemployment Rate

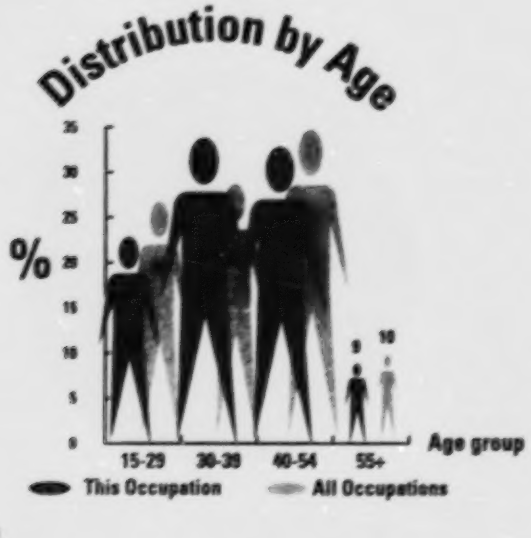


Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Machinists and Related Occupations







At Work

People in this group work in machinery, equipment, motor vehicle, automotive parts, aircraft and other metal products manufacturing companies, and in machine, tool and die and mould making shops.

- Machinists set up and operate a variety of machine tools including computer numerically controlled tools to perform precision-machining operations.
- Tool and die makers make, repair and modify custom-made, prototype and special tools, dies, jigs, fixtures and gauges using a variety of machine tools and precise measuring instruments.
- Machining and tooling inspectors inspect machined parts and tooling to maintain quality control standards.

This occupational group also includes mould makers and pattern makers.

Education, Training & Experience

- People in this group require secondary school education. Many recent entrants have a trade/vocational certificate.
- They can gain trade certification through apprenticeship or a combination of experience and courses in their trade.
- Trade certification is usually available in most provinces, but may not be compulsory in some provinces and territories.
- Qualified machinists and tool and die makers may also obtain interprovincial (Red Seal) trade certification which provides job mobility throughout the country.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 7231, 7232
Part 2 Field of Study Cross-index: T383, C315, C380, T315

NOC 723

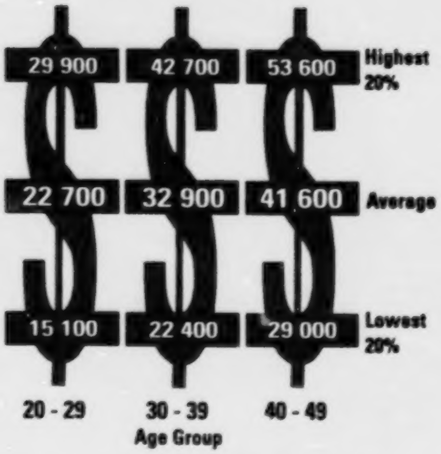
In These Occupations...

- 63,000 people were employed in 1998, an increase of 3.8% from 1988. After declining 9.7% over the 1988 to 1993 period, employment increased 15.0% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 75% are machinists and machining and tooling inspectors and 25% are tool and die makers.
- 1% work part-time, well below the average of 19% for all occupations.
- 3% are self-employed, well below the average of 17% for all occupations.
- 4% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 4.0% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations in the trades, transport and equipment operation sectors.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations and for other occupations in the trades, transport and equipment operation sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the non-electrical machinery and metal fabrication industries.

Earnings



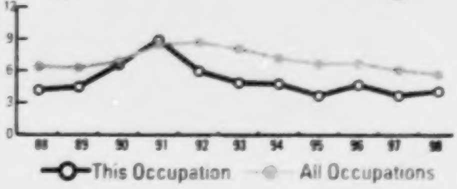
Overall Average for All Ages (15+)

39 100	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

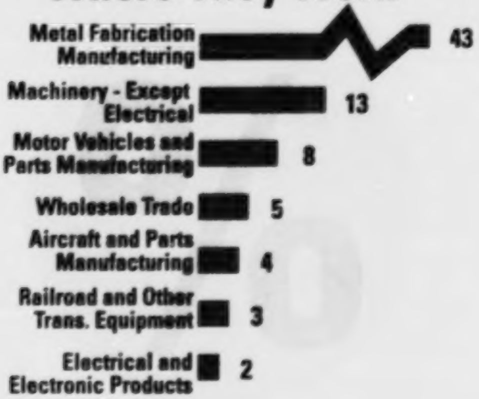
Unemployment Rate

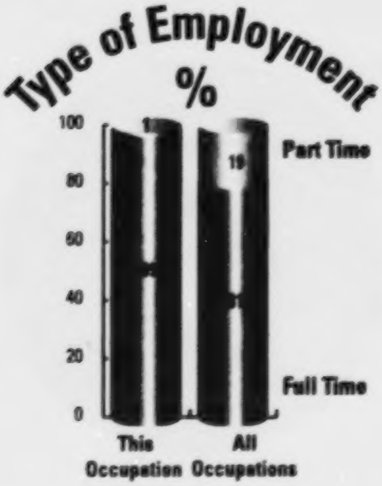


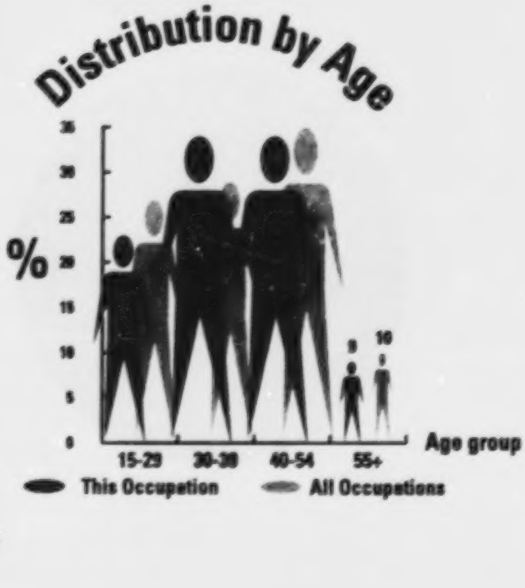
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Machinists and Machining and Tooling Inspectors

Where They Work







At Work

People in these occupations work in machinery, equipment, motor vehicle, automotive parts, aircraft and other metal products manufacturing companies, and in machine shops.

- Machinists set up and operate a wide variety of machine tools to cut or grind metal and similar materials into parts or products with precise dimensions.
- Machining and tooling inspectors inspect machined parts and tooling to maintain quality control standards.

Education, Training & Experience

- People in these occupations usually require secondary school education. Many recent entrants have a trade/vocational certificate.
- To gain trade certification, they must either complete a four-year apprenticeship program or have a combination of over four years' work experience and some college or industry courses in machining.
- Trade certification is available, but not compulsory, in all provinces and territories.
- Qualified machinists may also obtain interprovincial (Red Seal) trade certification which provides job mobility throughout the country.
- Machining and tool inspectors must have several years' experience as machinists, tool and die makers or machining tool operators.
- With experience, people in these occupations may progress to supervisory positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 723
Part 2 Field of Study Cross-index: C315, T314, T383, T316

NOC 7231

In These Occupations...

- 47,000 people were employed in 1998, an increase of 3.9% from 1988. After declining 8.9% over the 1988 to 1993 period, employment increased 14.0% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 1% work part-time, well below the average of 19% for all occupations.
- 3% are self-employed, well below the average of 17% for all occupations.
- 4% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 4.6% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations in the trades, transport and equipment operation sectors.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations and for other occupations in the trades, transport and equipment operation sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- The work of machinists continues to be transformed by the increasing use of sophisticated numerical control systems.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the non-electrical machinery and metal fabrication industries.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	28 000	40 500	50 200
Average	21 500	30 800	39 400
Lowest 20%	14 700	21 500	28 700

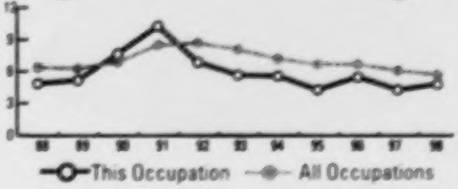
Overall Average for All Ages (15+)

This Occupation	All Occupations
37 100	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate



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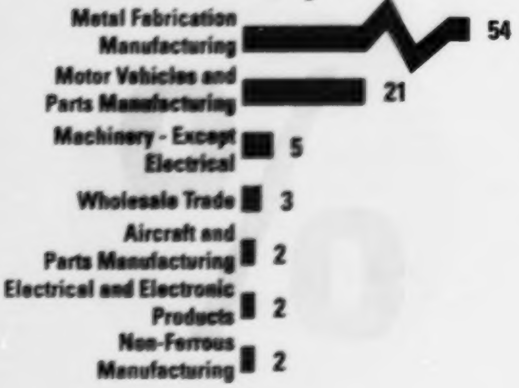
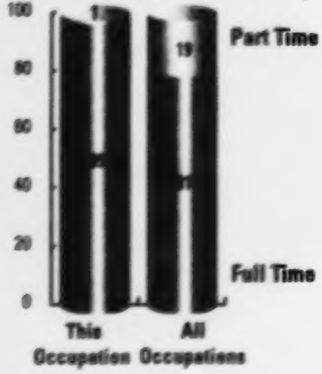
Tool and Die Makers

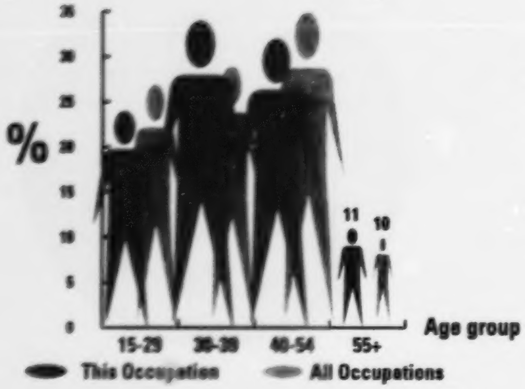
Where They Work



Type of Employment %



Distribution by Age



At Work

People in this occupation work in manufacturing industries and in tool and die, mould making and machine shops. They make, repair and modify custom-made, prototype or special tools, dies, jigs, fixtures and gauges that require precise dimensions. Their duties may require them to:

- Read and interpret drawings and specifications of tools, dies, prototypes and models;
- Operate a variety of machine tools to cut, turn, mill, plane, bore, grind and otherwise shape work pieces to prescribed dimensions;
- Machine, fit and assemble castings and other parts to make metal patterns, core boxes and match plates; and
- Machine, fit and assemble parts to make metal moulds for plastic injection moulding or other production processes.

This occupation also includes pattern makers and metal mould makers.

Education, Training & Experience

- People in this occupation usually require secondary school education. Many recent entrants have a trade/vocational certificate.
- To gain trade certification, tool and die makers must either complete a four- or five-year tool and die making apprenticeship program or have a combination of over five years' work experience and some high school, college or industry courses in tool and die making.
- Tool and die making trade certification is available, but not compulsory, in all provinces except Saskatchewan and the territories.
- Qualified tool and die makers may also obtain interprovincial (Red Seal) trade certification which provides job mobility throughout the country.
- Mould makers and pattern makers may need to complete apprenticeships or college programs in their area of expertise.
- Mould making and pattern making trade certification is available, but not compulsory, in Ontario and Quebec.
- With experience, these workers can progress to supervisory positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 723
Part 2 Field of Study Cross-index: C380, C315, T383, T381, T315

NOC 7232

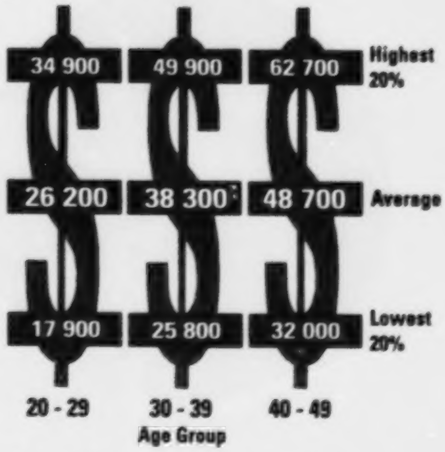
In These Occupations...

- 16,000 people were employed in 1998, an increase of 3.6% from 1988. After declining 12.0% over the 1988 to 1993 period, employment increased 17.7% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 1% work part-time, well below the average of 19% for all occupations.
- 3% are self-employed, well below the average of 17% for all occupations.
- 3% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 1.9% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for technical, paraprofessional and skilled occupations and for occupations in the trades, transport and equipment operation sectors.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations and for occupations in the trades, transport and equipment operation sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good" since employment opportunities and earnings are both well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the metal fabrication and non-electrical machinery industries.

Earnings



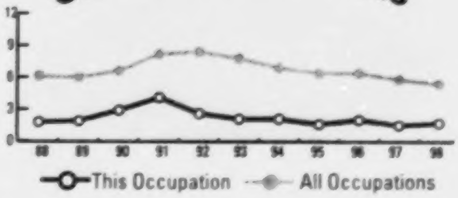
Overall Average for All Ages (15+)

44 900	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

Unemployment Rate



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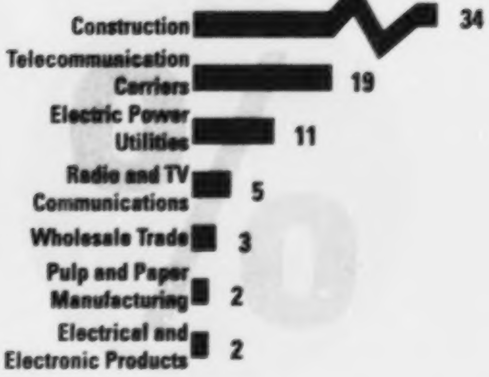
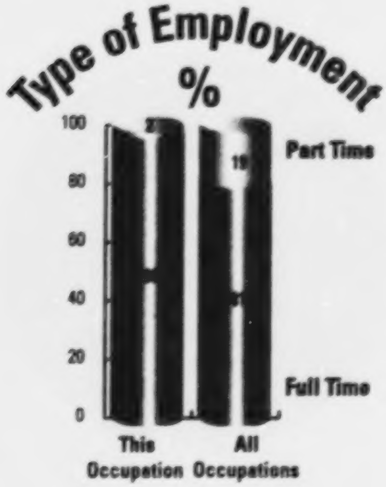
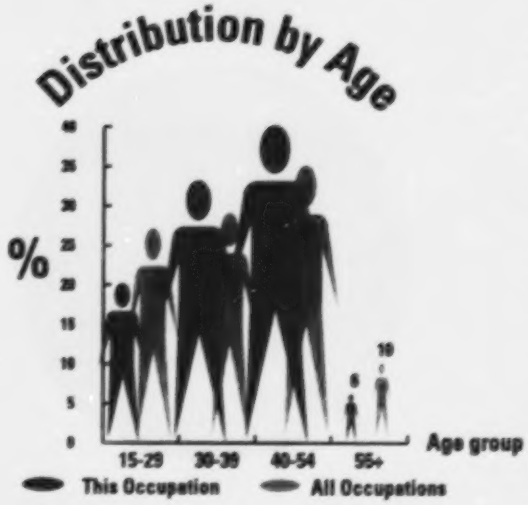
Electrical Trades and Telecommunications Occupations

Where They Work







At Work

People in this group work for electrical contractors; maintenance departments of buildings, factories, plants, mines and shipyards; electrical power generation, transmission and distribution and cable television companies; public utilities; and telephone and other telecommunications services and organizations. In general, they perform installing, testing, troubleshooting and repairing activities.

- Power system electricians work on electric power distribution system equipment and apparatus.
- Telecommunications line and cable workers work on lines and cables.
- Telecommunications installation and repair workers work on telephones and telephone switching, computer, data, voice and other telecommunications equipment.
- Cable television service and maintenance technicians work on cable television signal and associated equipment in buildings.
- Electrical power line and cable workers construct, maintain and repair overhead and underground electrical power transmission and distribution systems.

Education, Training & Experience

- People in this group usually require a high school diploma. Most young workers have a trade/vocational certificate or a community college diploma.
- To gain trade certification, most people in this group usually complete an apprenticeship program or have a combination of experience and courses. Trade certification is required for some occupations in some or all areas of Canada.
- Most telecommunications occupations in this group require a high school diploma. Many employers request a trade/vocational or community college diploma. Professional certification is available in most telecommunications occupations in this group.
- Qualified tradespersons may also obtain interprovincial (Red Seal) trade certification which provides job mobility throughout the country.
- In some occupations, people need college or other courses in electronics and electrical technology, experience or on-the-job training or apprenticeship training.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 7241, 7242
Part 2 Field of Study Cross-index: T362, C362, U360, C382

NOC 724

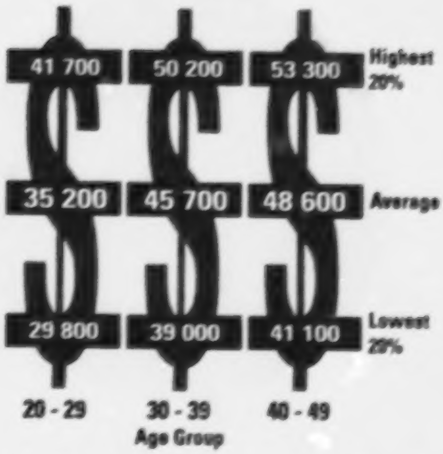
In These Occupations...

- 122,000 persons were employed in 1998, a decrease of 8.5% from 1988. Most of the decline occurred from 1988 to 1993 when employment decreased 6.0%. Employment also declined 2.6% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the last ten years and 8.2% over the last five years.
- 35% of workers are electricians of various types; 23% are industrial electricians; and 20% are telecommunications installation and repair workers.
- 2% of workers are part-time, well below the average of 19% for all occupations.
- 5% of workers are self-employed, well below the average of 17% for all occupations.
- 4% of workers are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 7.3% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations and for occupations in the trades, transport and equipment operation sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited", as a result of long-term employment losses.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Conditions are likely to vary among the occupations in this group. There may be particularly good opportunities for powerline workers.
- Continued fierce competition and significant productivity gains in the telecommunications industry will lead to continuing restructuring in the industry. Work in telecommunications installation is likely to be increasingly outsourced.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the construction and telecommunications carriers industries.

Earnings



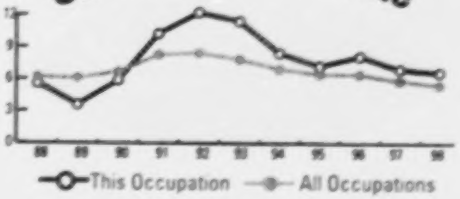
Overall Average for All Ages (15+)

45 700	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
(LIMITED)	(LIMITED)

Unemployment Rate



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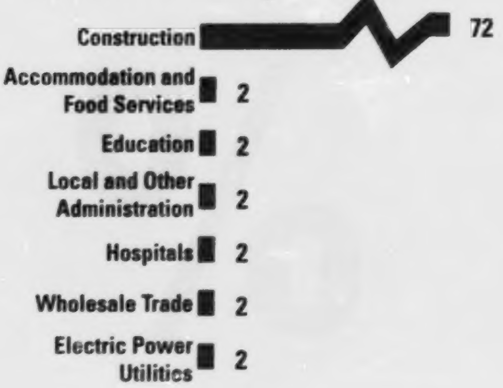
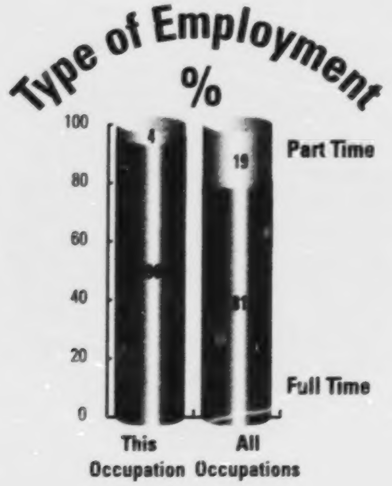
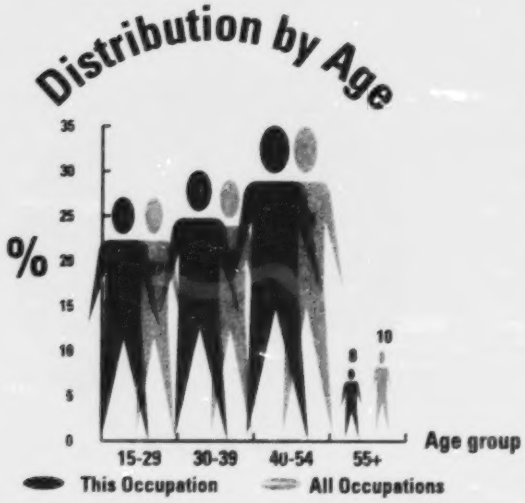
Electricians (Except Industrial and Power Systems)

Where They Work







At Work

These electricians work for electrical contractors and maintenance departments of buildings and other organizations. Their duties may require them to:

- read and interpret drawings and electrical code specifications to determine wiring layouts;
- install, replace and repair lighting fixtures and electrical control, fire alarm and electrical distribution equipment such as switches, relays and circuit breaker panels;
- connect wires to fixtures to form circuits and test circuits using test equipment to ensure compatibility and safety;
- troubleshoot and isolate faults in electrical and electronic systems; and
- connect electrical power to sound and visual communication equipment, signalling devices and heating and cooling systems.

Education, Training & Experience

- These electricians must complete high school. Most young workers have a trade/vocational certificate or a community college diploma.
- They must usually complete a four- to five-year apprenticeship program.
- Trade certification is compulsory for construction electricians in all provinces except Manitoba. It is available, but voluntary, in Manitoba, the Northwest Territories and the Yukon.
- Trade certification is compulsory for domestic and rural electricians in Ontario and Quebec. It is available, but voluntary, in Newfoundland.
- According to the International Brotherhood of Electrical Workers, these electricians require a Construction and Maintenance Licence.
- Qualified electricians may also obtain interprovincial (Red Seal) trade certification which provides job mobility throughout the country.
- With experience, these electricians may progress to supervisory positions. Many electricians are self-employed.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 724
Part 2 Field of Study Cross-index: C362, T362, T332

NOC 7241

In These Occupations...

- 43,000 persons were employed in 1998, a decrease of 6.1% from 1988. However, after declining 8.4% over the 1988 to 1993 period, employment increased 2.5% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the last ten years, and 8.2% over the last five years.
- 4% of these electricians are part-time, well below the average of 19% for all occupations.
- 10% of these electricians are self-employed, compared to an average of 17% for all occupations.
- 2% of these electricians are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 12.8% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for technical, paraprofessional and skilled occupations and for occupations in the trades, transport and equipment operation sectors.
- the average earnings are comparable to other technical, paraprofessional and skilled occupations and to other occupations in the trades, transport and equipment operation sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Limited", as a result of long-term employment losses.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Continued economic growth will increase opportunities in this highly cyclical occupation. Wiring of home security systems and electronic house management systems are new areas of work for these electricians.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the construction industry.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	27 400	37 300	40 500
Average	22 700	33 800	38 400
Lowest 20%	18 500	26 400	27 800

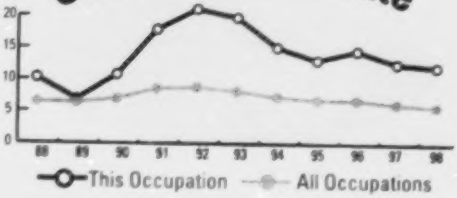
Overall Average for All Ages (15+)

This Occupation	All Occupations
38 400	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

Unemployment Rate



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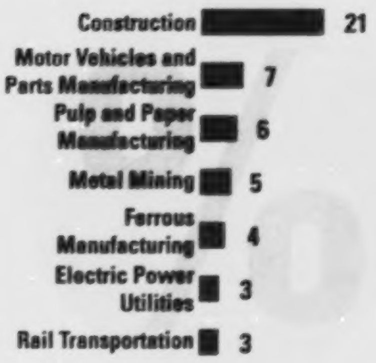
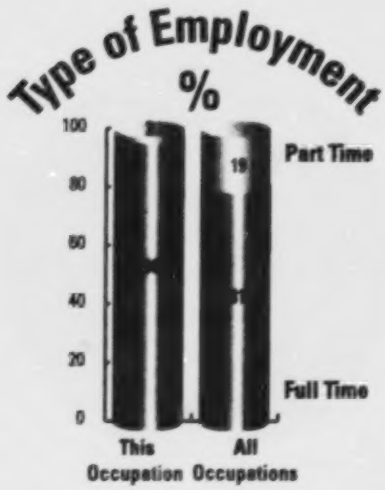
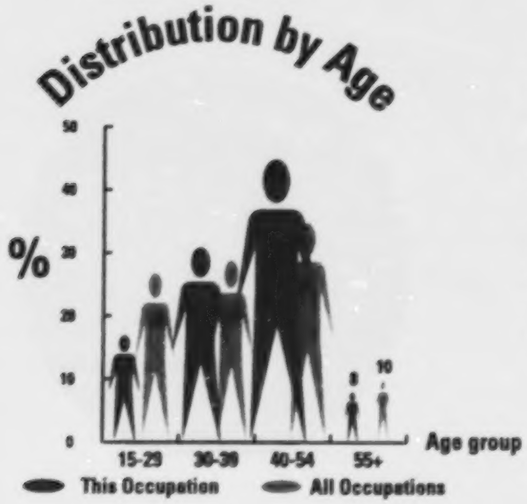
Industrial Electricians

Where They Work







At Work

These electricians work for maintenance departments of factories, plants, mines, shipyards and other industrial establishments. Their duties may require them to:

- read and interpret drawings and electrical code specifications to determine wiring layouts of industrial electrical equipment installations;
- install, replace and repair electrical wiring, receptacles, switch boxes, conduits, feeders, cable assemblies, lighting fixtures and other electrical components;
- test equipment and components for continuity, current, voltage and resistance;
- maintain, repair, install and test switchgears, transformers, switchboard meters, regulators and reactors; and
- maintain, repair, test and install electrical motors, generators, industrial storage batteries and hydraulic and pneumatic electrical control systems.

This occupation also includes marine, mill, mine and plant electricians.

Education, Training & Experience

- Industrial electricians usually require secondary school education. Most young workers have a trade/vocational certificate or a community college diploma.
- To gain trade certification, they must usually either complete a four- or five-year industrial electrician apprenticeship program or have a combination of over five years' work experience and some high school, college or industry courses in industrial electrical equipment.
- Trade certification is compulsory in Prince Edward Island, Quebec and the Yukon. It is available, but voluntary, in Newfoundland, Nova Scotia, New Brunswick, Ontario and Manitoba.
- According to the International Brotherhood of Electrical Workers, electrical contractors in Canada require a Construction and Maintenance Licence.
- Qualified industrial electricians may also obtain interprovincial (Red Seal) trade certification which provides job mobility throughout the country.
- Marine electricians in New Brunswick may have to complete a marine electrician apprenticeship program.
- Trade certification is available but voluntary in this province.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 724
Part 2 Field of Study Cross-index: C362, C382, T362, C380

NOC 7242

- Mine electricians in Nova Scotia may have to complete a mine electrician apprenticeship program.
- With experience, these electricians may progress to supervisory positions.

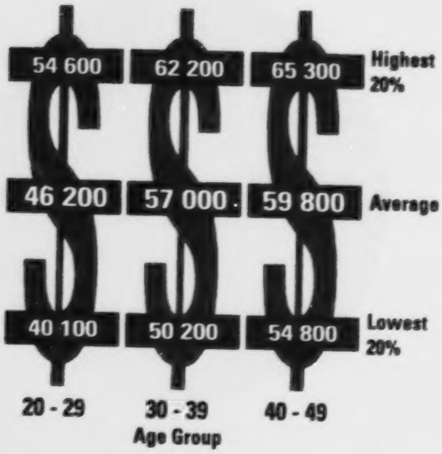
In These Occupations...

- 28,000 persons were employed in 1998, a decrease of 9.0% from 1988. Most of the decline occurred from 1993 to 1998 when employment decreased 8.6%. In comparison, employment in all occupations grew 12.3% over the last ten years, and 8.2% over the last five years.
- 2% of these electricians are part-time, well below the average of 19% for all occupations.
- 2% of these electricians are self-employed, well below the average of 17% for all occupations.
- 1% of these electricians are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 4.8% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations in the trades, transport and equipment operation sectors.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations and for occupations in the trades, transport and equipment operation sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", as a result of long-term employment losses, although earnings are well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Production technologies involving robotics and automated transfer machinery have created new areas of work for industrial electricians.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the construction industry.

Earnings



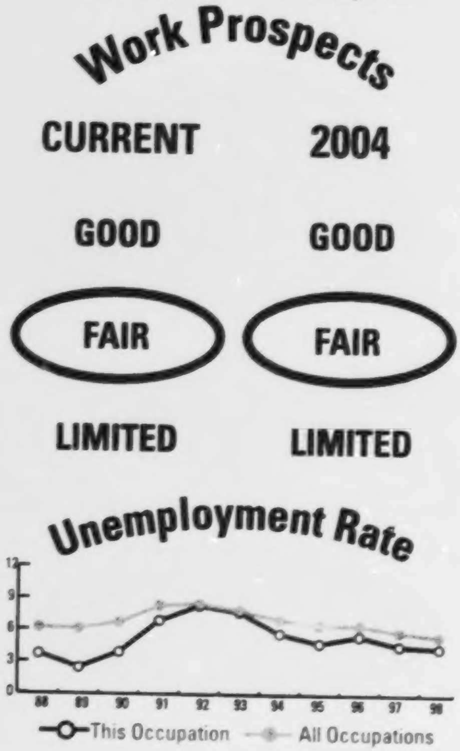
Overall Average for All Ages (15+)

50 900	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

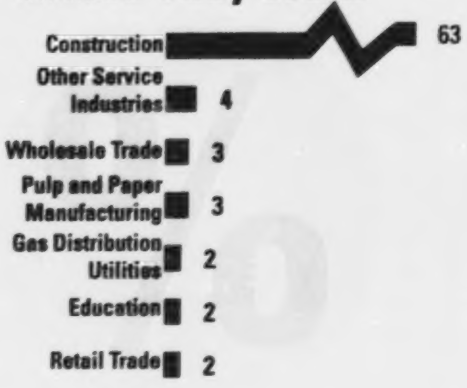
Unemployment Rate

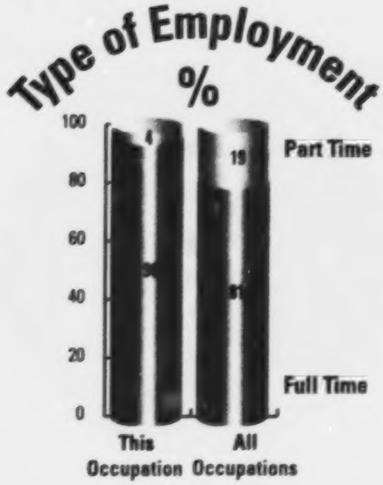


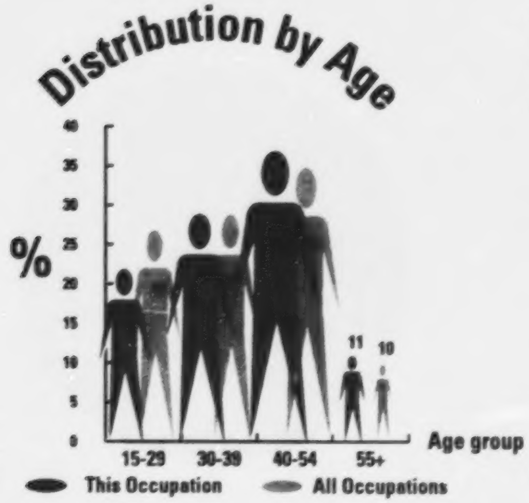
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Plumbers, Pipefitters and Gas Fitters

Where They Work







At Work

People in this group work for maintenance departments of factories, plants and similar organizations; trade contractors; and gas utility and gas servicing companies. They may also be self-employed.

- Plumbers install, repair and maintain pipes, plumbing fixtures and other plumbing equipment for water distribution and waste water disposal in residential, commercial and industrial buildings.
- Steam fitters and pipefitters lay out, assemble, fabricate, maintain and repair piping systems carrying water, steam, chemicals and fuel in heating, cooling, lubricating and other process piping systems.
- Sprinkler system installers fabricate, install, test, maintain and repair water, foam, carbon dioxide and dry chemical fire protection sprinkler systems.
- Gas fitters install, inspect, repair and maintain gas lines, meters, gas furnaces, appliances and other gas equipment in residential, commercial and industrial buildings.

This occupational group also includes marine pipefitters and gas customer servicers.

Education, Training & Experience

- People in this group must have some high school or a high school diploma. Many recent entrants have a trade/vocational certificate.
- To gain trade certification, people in this group must complete an apprenticeship program, or have a combination of experience and high school, college or industry courses. Trade certification may be compulsory or voluntary depending on the province or territory.
- Qualified tradespersons may also obtain interprovincial (Red Seal) trade certification which provides job mobility throughout the country.
- Gas fitters require a licence in some provinces.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: T332, T314, C350, T350, C331

NOC 725

In These Occupations...

- 53,000 people were employed in 1998, an increase of 9.8% from 1988. After declining 8.9% over the 1988 to 1993 period, employment increased 20.6% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 56% are plumbers; 34% are steam fitters, pipefitters and sprinkler system installers; and 10% are gas fitters.
- 4% work part-time, well below the average of 19% for all occupations.
- 16% are self-employed, compared to an average of 17% for all occupations.
- 1% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 10.3% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for technical, paraprofessional and skilled occupations.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations and for other occupations in the trades, transport and equipment operation sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, the outlook is expected to improve to "Good". The number of job openings in these occupations is expected to increase more rapidly than the number of qualified job seekers, mostly due to a significant level of retirements and strong employment growth in these occupations.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the construction industry.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	45 800	56 100	61 100
Average	33 200	42 100	45 800
Lowest 20%	20 100	28 600	31 400

Age Group

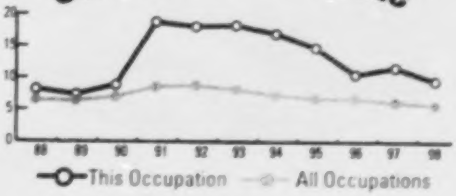
Overall Average for All Ages (15+)

This Occupation	All Occupations
34 200	37 400

Work Prospects

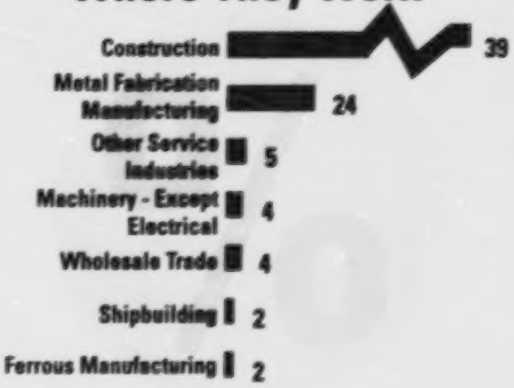
CURRENT	2004
GOOD	[✓ GOOD]
[✓ FAIR]	FAIR
LIMITED	LIMITED

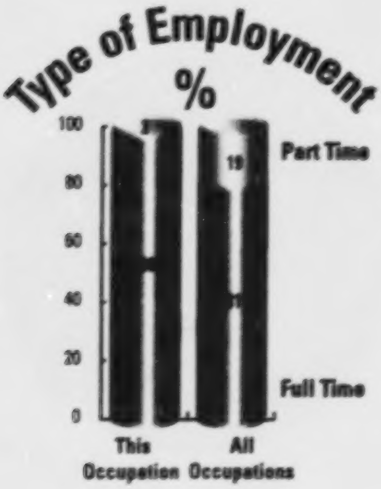
Unemployment Rate

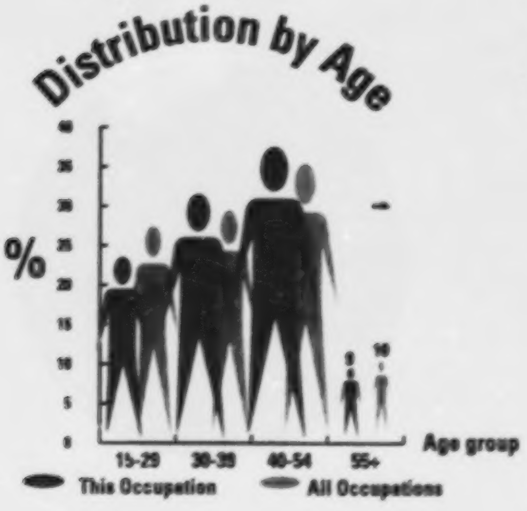


Metal Forming, Shaping and Erecting Occupations

Where They Work







At Work

People in this group work for construction contractors; sheet metal fabrication and welding shops; manufacturers of sheet metal and fabricated metal products, structural steel, boilers, platework, aircraft, heavy machinery and transportation equipment, and sheet metal work, welding and ironwork contractors; and ship building companies.

- Sheet metal workers fabricate, assemble, install and repair sheet metal products.
- Boilermakers and structural metal and platework fabricators and fitters fabricate, assemble, erect and repair boilers, tanks, pressure vessels, platework and other heavy metal products and structures.
- Ironworkers fabricate, erect, hoist, install, repair and service structural ironwork, precast concrete, curtain walls, ornamental iron and other metals used in the construction of buildings, bridges and other structures.
- Blacksmiths forge chains, wrought iron fixtures, agricultural implements, structural components and other metal items.
- Die setters select dies and set up forging machines.

Education, Training & Experience

- People in most of these occupations usually require secondary school education. Many recent entrants have a trade/vocational certificate.
- To gain certification, they must usually complete an apprenticeship or have a combination of experience and trade courses. Trade certification is available in most provinces and territories.
- Qualified tradespersons may also obtain interprovincial (Red Seal) trade certification which provides job mobility throughout the country.
- Blacksmiths and die setters may require a high school diploma and several years' forging machine operator experience.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 7261
Part 2 Field of Study Cross-index: T333, C331, T332, C350, T361

NOC 726

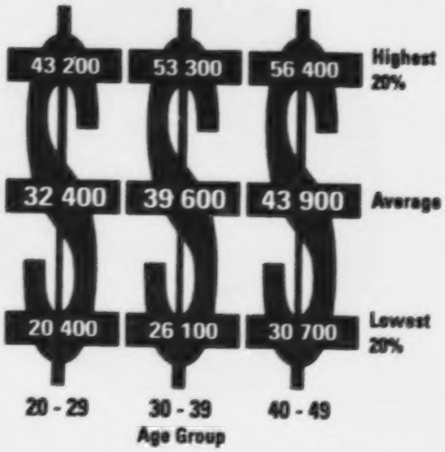
In These Occupations...

- 72,000 people were employed in 1998, a decrease of 9.6% from 1988. However, after declining 23.2% over the 1988 to 1993 period, employment increased 17.6% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 43% are sheet metal workers; 22% are structural metal and platework fabricators and fitters; and 20% are ironworkers.
- 2% work part-time, well below the average of 19% for all occupations.
- 7% are self-employed, well below the average of 17% for all occupations.
- 3% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 12.1% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for technical, paraprofessional and skilled occupations and for occupations in the trades, transport and equipment operation sectors.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations and for other occupations in the trades, transport and equipment operation sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited", since employment opportunities are well below average, although earnings are at the average level.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Increasing use of plastics and composite substitutes and more efficient production technologies are decreasing opportunities in these occupations.

Earnings



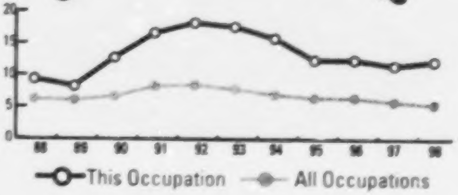
Overall Average for All Ages (15+)

36 400	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

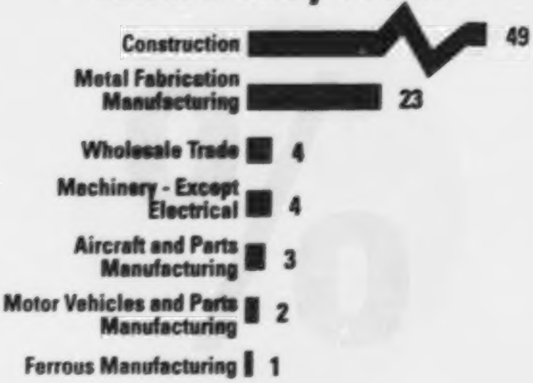
Unemployment Rate



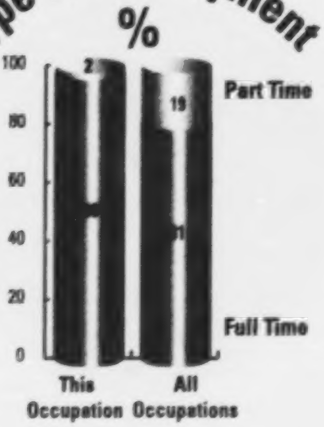
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Sheet Metal Workers

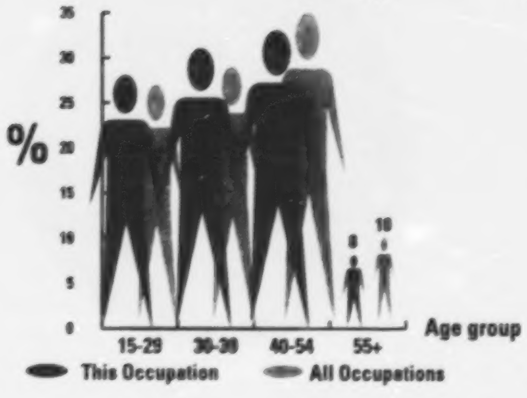
Where They Work



Type of Employment



Distribution by Age



At Work

Sheet metal workers work for sheet metal fabrication shops, sheet metal products manufacturing companies and sheet metal work contractors. Their duties may require them to:

- lay out, measure and make sheet metal according to drawings and templates;
- operate light metalworking machines such as shears, brakes, punches and drill presses to cut, bend, punch, drill, shape and straighten sheet metal;
- operate laser and plasma cutting equipment to cut sheet metal;
- fit and join sheet metal using riveting, welding, soldering and similar equipment to fabricate products such as ventilation shafts, eavestroughs, partition frames, roof decking and sheet metal buildings; and
- inspect quality and installation to make sure that the product conforms to specifications.

Education, Training & Experience

- Sheet metal workers usually require secondary school education. Many recent entrants have a trade/vocational certificate.
- To obtain trade certification, they must usually either complete a three- to five-year apprenticeship program or have a combination of over four years' work experience and some high school, college or industry courses in sheet metal working.
- Trade certification is compulsory in Quebec, Ontario, Saskatchewan, Alberta and British Columbia. It is available, but voluntary, in all other provinces and territories.
- Qualified sheet metal workers may also obtain interprovincial (Red Seal) trade certification which provides job mobility throughout the country.
- With experience, sheet metal workers may progress to supervisory positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 726
Part 2 Field of Study Cross-index: T314, T381, T333

NOC 7261

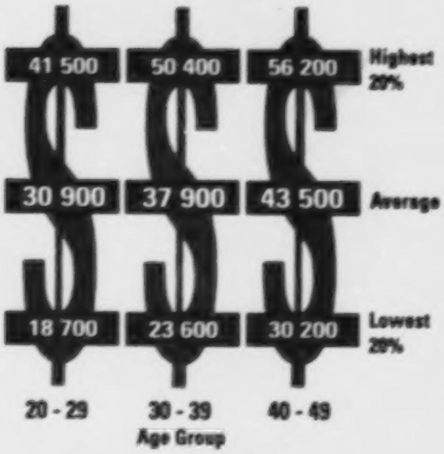
In These Occupations...

- 31,000 people were employed in 1998, a decrease of 19.6% from 1988. Most of the decline occurred from 1988 to 1993, when employment decreased 18.9%. Employment declined 0.8% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 2% work part-time, well below the average of 19% for all occupations.
- 9% are self-employed, compared to an average of 17% for all occupations.
- 3% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 10.2% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for technical, paraprofessional and skilled occupations.
- the average earnings are comparable to other technical, paraprofessional and skilled occupations and to other occupations in the trades, transport and equipment operation sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Limited" as a result of large long-term employment losses.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.

Earnings



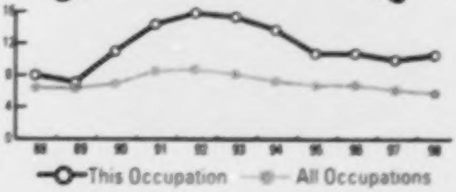
Overall Average for All Ages (15+)

34 900	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

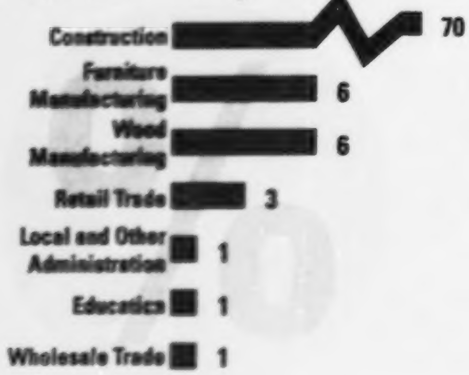
Unemployment Rate

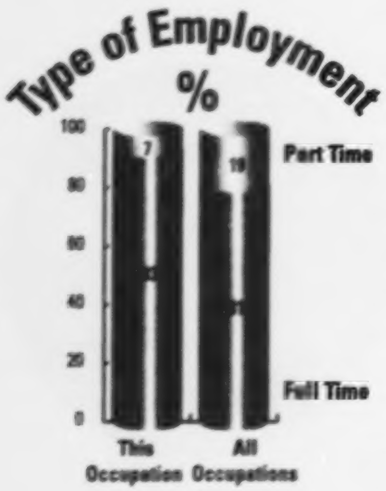


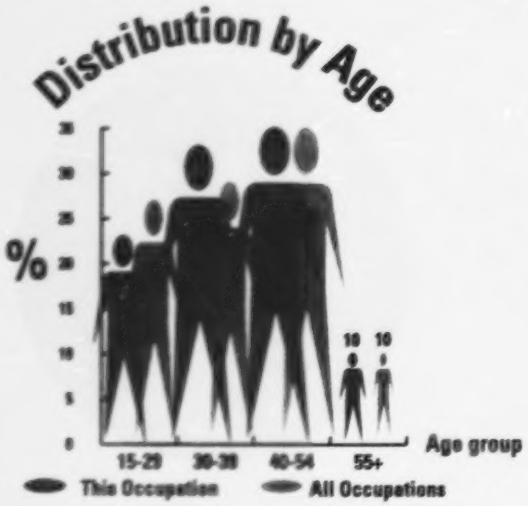
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Carpenters and Cabinetmakers

Where They Work







At Work

People in this group work for construction companies; carpentry and cabinetmaking contractors; maintenance departments of factories, plants and other organizations; and furniture manufacturing and repair companies. They may also be self-employed.

- Carpenters construct, erect, install, maintain and repair structures of wood, wood substitutes and other materials. They build foundations, install floor beams, lay subflooring, erect walls and roof systems, and fit and install doors, stairs, mouldings and other decorative work.
- Carpenters may specialize in residential, industrial or commercial construction and in finishing work, renovations and restorations, or perform rough, maintenance or general carpentry.
- Cabinetmakers construct and repair wooden cabinets, furniture, fixtures and related products. They operate woodworking machines such as power saws, jointers, mortisers and shapers, and use hand tools to cut, shape and form components and parts and apply finishes to constructed products.
- Cabinetmakers also restyle wooden furniture and fixtures and construct built-in cabinets.

Education, Training & Experience

- Carpenters or cabinetmakers usually require secondary school education. Many recent entrants have a high school diploma.
- To gain trade certification, they usually have an apprenticeship or a combination of experience and some courses in their field of work.
- Trade certification is available, but voluntary, in most provinces and territories. In Quebec, trade certification for carpenters is compulsory.
- Qualified carpenters and cabinetmakers may also obtain interprovincial (Red Seal) trade certification which provides job mobility throughout the country.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 7271, 7272
Part 2 Field of Study Cross-index: T332, C331, C360

NOC 727

In These Occupations...

- 113,000 people were employed in 1998, a decrease of 9.9% from 1988. However, after declining 19.5% over the 1988 to 1993 period, employment increased 12.0% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 86% are carpenters and 14% are cabinetmakers.
- 7% work part-time, well below the average of 19% for all occupations.
- 34% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the past ten years.
- 2% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 14.2% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for technical, paraprofessional and skilled occupations and for occupations in the trades, transport and equipment operation sectors.
- the average earnings are among the lowest for technical, paraprofessional and skilled occupations but are comparable to those for other occupations in the trades, transport and equipment operation sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited" as a result of long-term employment losses.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Use of more efficient tools and building methods is affecting the skill requirements of carpenters. Factory-produced cabinets are reducing the need for cabinetmakers.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the construction industry.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	45 700	58 100	63 500
Average	33 700	42 100	45 600
Lowest 20%	20 300	24 500	23 400

Age Group

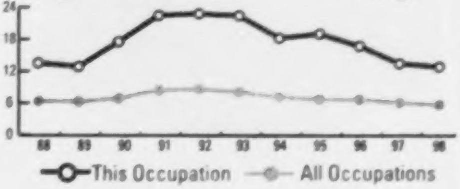
Overall Average for All Ages (15+)

This Occupation	All Occupations
33 200	37 400

Work Prospects

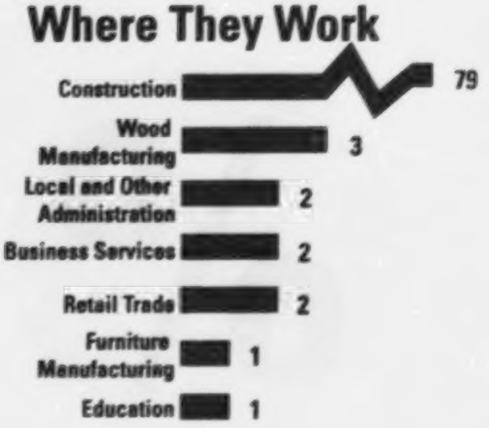
CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

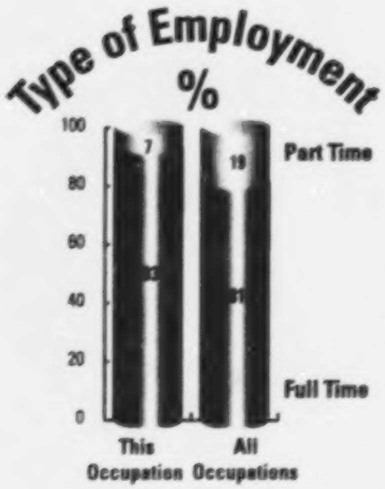
Unemployment Rate

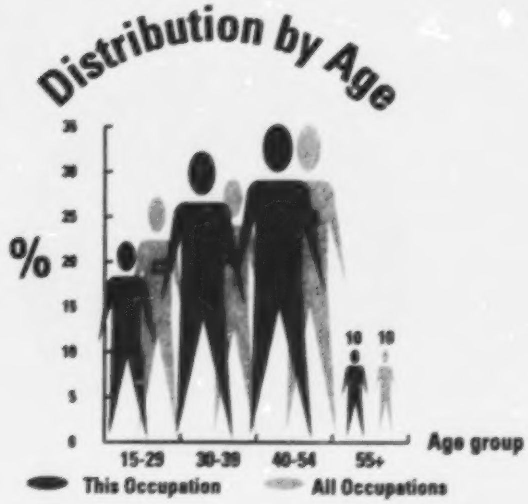


Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Carpenters







At Work

Carpenters work for construction companies, carpentry contractors, offices, and maintenance departments of factories, plants and other organizations. They may also be self-employed. Their duties may require them to:

- read and interpret blueprints, drawings and sketches;
- prepare layouts to conform to building codes;
- measure, cut, shape, assemble and join materials made of wood, wood substitutes and other materials;
- build foundations, install floor beams, lay subflooring and erect walls and roof systems;
- fit and install trim such as doors, stairs, moulding and hardware; and
- maintain, repair and renovate residences and wooden structures in mills, mines, hospitals, industrial plants and other organizations.

Education, Training & Experience

- Carpenters usually require secondary school education. Many recent entrants have a high school diploma.
- To gain trade certification, carpenters must usually either complete a three- to four-year apprenticeship program or have a combination of over four years' work experience and some high school, college or industry courses in carpentry.
- Trade certification is compulsory in Quebec and available, but voluntary, in all other provinces and territories.
- Qualified carpenters may also obtain interprovincial (Red Seal) trade certification which provides job mobility throughout the country.
- With experience, carpenters may progress to supervisory positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 727
Part 2 Field of Study Cross-index: C331, T332, T333, T383, C334

NOC 7271

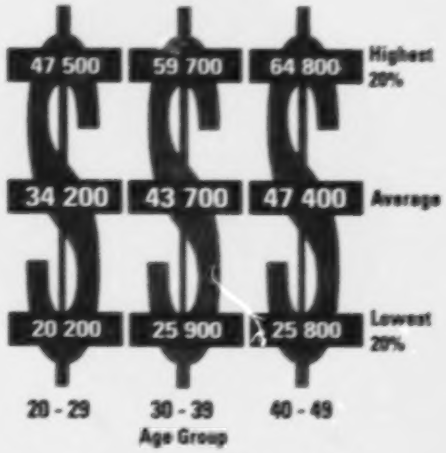
In These Occupations...

- 97,000 people were employed in 1998, a decrease of 15.9% from 1988. However, after declining 21.1% over the 1988 to 1993 period, employment increased 6.6% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 7% work part-time, well below the average of 19% for all occupations.
- 33% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed in this occupation has increased significantly over the last ten years.
- 2% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 15.3% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for technical, paraprofessional and skilled occupations and for occupations in the trades, transport and equipment operation sectors.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations and for other occupations in the trades, transport and equipment operation sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Limited" as a result of large long-term employment losses.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- New tools, such as nailers and sanders with electronic speed control, reduce fatigue and make carpenters more efficient. New building techniques, such as plastic concrete forms, also affect the skill requirements and the demand for carpenters.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the construction industry.

Earnings



Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	47 500	59 700	64 800
Average	34 200	43 700	47 400
Lowest 20%	20 200	25 900	25 800

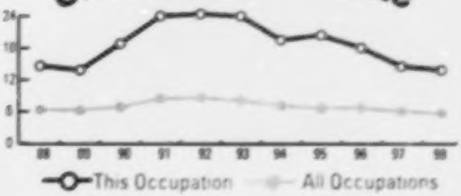
Overall Average for All Ages (15+)

This Occupation	All Occupations
34 400	37 400

Work Prospects

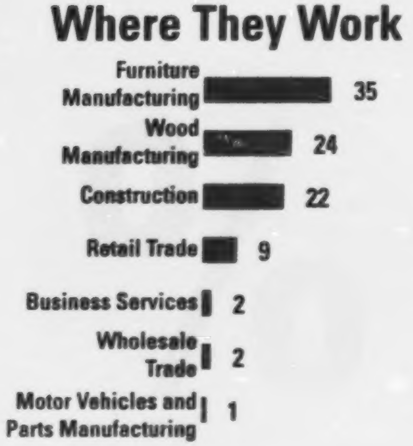
CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

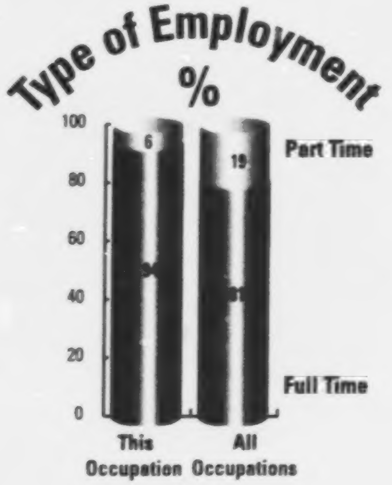
Unemployment Rate

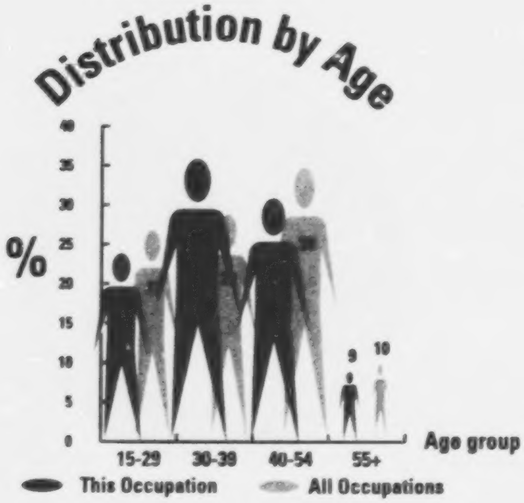


Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Cabinetmakers







At Work

Cabinetmakers work for furniture manufacturing and repair companies, construction companies and cabinetmaking contractors. They may also be self-employed. Their duties may require them to:

- study plans, specifications and drawings, or prepare specifications;
- operate woodworking machines such as power saws, jointers, mortisers and shapers, and use hand tools to cut, shape and form parts and components;
- trim joints and fit parts and subassemblies together to form complete units using glue and clamps, and reinforce joints using nails, screws and other fasteners;
- sand surfaces and apply veneer stain or polish to finished products; and
- repair and restyle wooden furniture, fixtures and related products.

Education, Training & Experience

- Cabinetmakers usually require secondary school education. Many recent entrants have a high school diploma.
- To gain trade certification, cabinetmakers must usually either complete a four-year apprenticeship program or have a combination of over four years' work experience and some high school or college courses in cabinetmaking.
- Trade certification is available, but voluntary, in all provinces and territories.
- Qualified cabinetmakers may also obtain interprovincial (Red Seal) trade certification which provides job mobility throughout the country.
- With experience, cabinetmakers may progress to supervisory positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 727
Part 2 Field of Study Cross-index: C331, T332, T333, T383, C334

NOC 7272

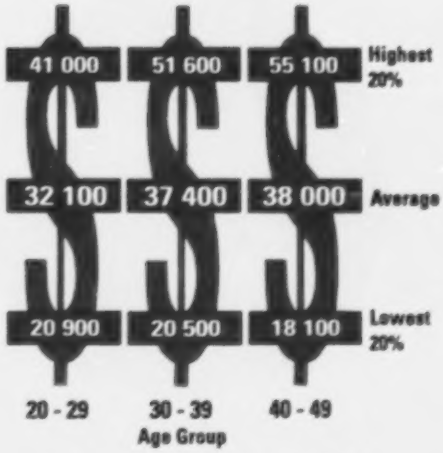
In These Occupations...

- 16,000 people were employed in 1998, an increase of 30.7% from 1988. After declining 9.0% over the 1988 to 1993 period, employment increased 43.7% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 6% work part-time, well below the average of 19% for all occupations.
- 35% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed in this occupation has increased significantly over the last ten years.
- 6% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 7% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the lowest for technical, paraprofessional and skilled occupations and for occupations in the trades, transport and equipment operation sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities are well above average but earnings are well below average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Cabinets are increasingly built in factories rather than made to order. The market for made-to-order cabinets will become a specialty market, with room for only the most highly skilled cabinetmakers.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the construction and wood manufacturing industries.

Earnings



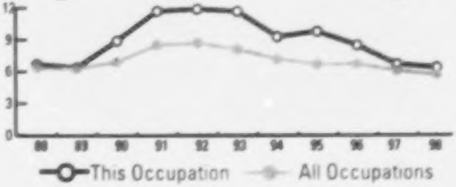
Overall Average for All Ages (15+)

This Occupation	All Occupations
29 000	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

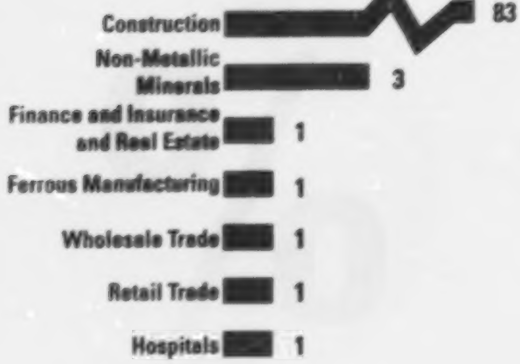
Unemployment Rate

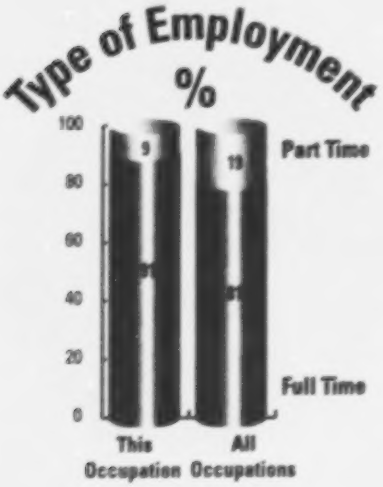


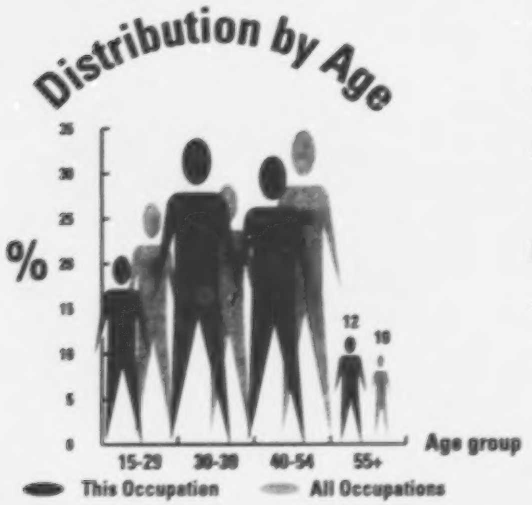
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Masonry and Plastering Trades

Where They Work







At Work

People in this occupational group work for construction companies; brick, stone, refractory, restoration, masonry, plastering, drywalling and lathing contractors; precast concrete products manufacturers; and other organizations. They may also be self-employed.

- Brick and stone masons lay bricks, concrete blocks, stone and similar materials to construct and restore walls, foundations, fireplaces and other structures in residential, commercial, industrial and institutional construction. They may also build patios, garden walls and other decorative installations.
- Cement masons install, finish, maintain and restore various masonry surfaces.
- Restoration masons restore various masonry surfaces.
- Tilesetters cover interior and exterior walls, floors and ceilings with ceramic, marble and quarry tile, mosaics and terrazzo. They also produce decorative wall, mural and floor designs.
- Plasterers install, finish, maintain and restore plaster or similar materials to interior and exterior walls, ceilings and building partitions to produce plain and decorative surfaces. They may spray acoustic materials over walls and ceilings.
- Drywall installers and finishers apply drywall sheets to walls and ceilings.
- Lathers install support frameworks for ceiling systems, interior and exterior walls and building partitions.

Education, Training & Experience

- People in this group usually require secondary school education. Many recent entrants have a high school diploma.
- To gain trade certification, they must complete a two- to four-year apprenticeship, depending on their area of work, or have a combination of three or four years' experience and high school, college or industry courses.
- They may require trade certification to work in their province or territory or on federal projects.
- Qualified bricklayers, cement masons and lathers may also obtain interprovincial (Red Seal) trade certification which provides job mobility throughout the country.

In These Occupations...

- 38,000 people were employed in 1998, a decrease of 11.4% from 1988. Most of the decline occurred from 1988 to 1993, when employment decreased 7.0%. Employment declined 4.7% from

Check out the 'big picture' in "World of Work: Overviews and Trends"

1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.

- 43% are plasterers, drywall installers, finishers and lathers; 29% are bricklayers; 16% are cement finishers; and 11% are tilesetters.
- 9% work part-time, well below the average of 19% for all occupations.
- 33% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 1% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 16.6% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for technical, paraprofessional and skilled occupations and for occupations in the trades, transport and equipment operation sectors.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations and for other occupations in the trades, transport and equipment operation sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited" as a result of large long-term employment losses.
- Over the next five years, the outlook is expected to improve to "Fair", as the number of job openings is expected to increase more rapidly than the number of qualified job seekers. The factors contributing to this are above-average growth in the construction sector; a high retirement rate; and little change in the number of non-completers looking for work.
- Changes in technology, better tapes and faster drying plasters have made plastering and drywalling occupations more productive. Workers who develop the skills required by newer techniques will have the best opportunities.
- Almost all of the increase in employment requirements through 2004 for these occupations is expected to occur in the construction industry.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	47 900	59 000	65 700
Average	33 500	42 800	46 400
Lowest 20%	19 100	24 400	26 800

Age Group

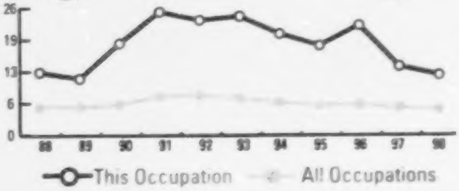
Overall Average for All Ages (15+)

This Occupation	All Occupations
33 900	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	[✓ FAIR]
[✓ LIMITED]	LIMITED

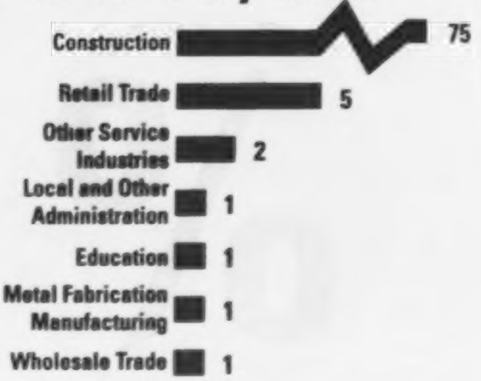
Unemployment Rate



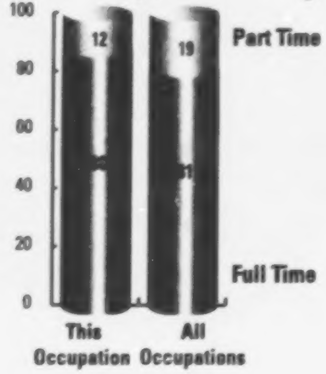
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Other Construction Trades

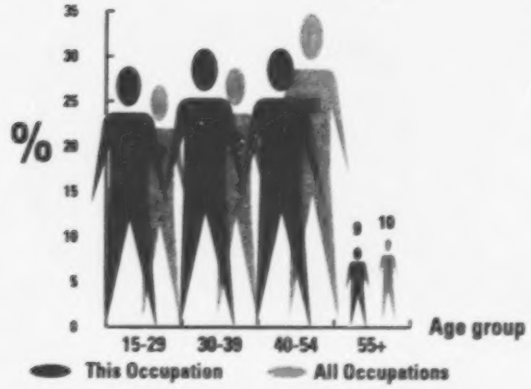
Where They Work



Type of Employment



Distribution by Age



At Work

People in this group work for carpet outlets; retail service and repair and glass fabrication shops; construction companies; and contractors in roofing, insulation, construction glass installation, painting, floor covering and building maintenance. They may also be self-employed.

- Roofers install, repair and replace roofing systems on low-pitched roofs, and shingles, shakes and other roofing tiles on high-pitched roofs.
- Shinglers install or replace shingles, shakes and roofing tiles on high-pitched roofs.
- Glaziers prepare, install and replace glass in buildings, vehicles, furniture and other products.
- Insulators apply insulation materials to plumbing, heating, cooling and refrigeration systems, piping equipment, pressure vessels and interior surfaces of buildings to prevent or reduce the passage of heat, cold, sound and fire.
- Painters and decorators apply paint, wallpaper and other finishes to interior and exterior surfaces of buildings.
- Floor covering installers install carpet, wood, linoleum, vinyl and other resilient floor coverings, and hardwood floors including strip, block and plank floors.

Education, Training & Experience

- People in this group usually require secondary school education. Many recent entrants have a high school diploma.
- Shinglers need one to two years' on-the-job training.
- Except for shinglers, they may require trade certification in their province or territory of work.
- To gain trade certification, they usually need an apprenticeship or a combination of experience and trade courses.
- Qualified tradespersons in this group may also obtain interprovincial (Red Seal) trade certification which provides job mobility throughout the country.

Check out the 'big picture' in "World of Work: Overviews and Trends"

In These Occupations...

- 62,000 people were employed in 1998, an increase of 0.6% from 1988. After declining 7.9% over the 1988 to 1993 period, employment increased 9.2% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 47% are painters and decorators; 19% are roofers and shinglers; and 17% are floor covering installers.
- 12% work part-time, compared to an average of 19% for all occupations.
- 37% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 6% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 15.2% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for technical, paraprofessional and skilled occupations and for occupations in the trades, transport and equipment operation sectors.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations and for other occupations in the trades, transport and equipment operation sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the construction industry.

Earnings

20 - 29	30 - 39	40 - 49	
45 700	57 600	63 600	Highest 20%
33 100	42 000	45 600	Average
19 100	23 700	24 400	Lowest 20%

Age Group

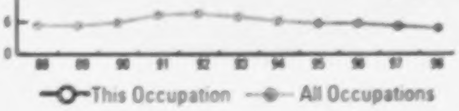
Overall Average for All Ages (15+)

33 400	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

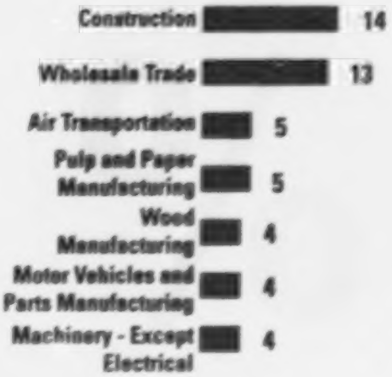
Unemployment Rate

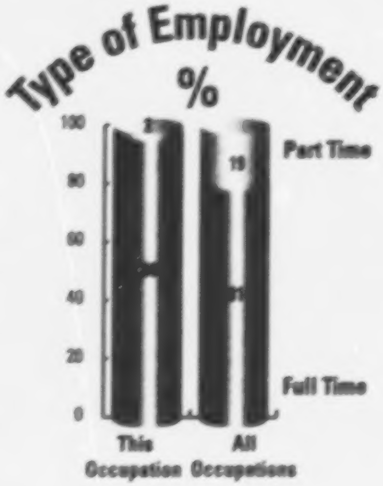


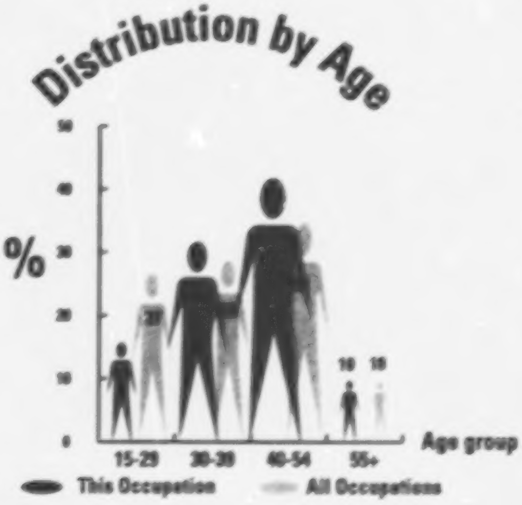
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Machinery and Transportation Equipment Mechanics (Except Motor Vehicle)

Where They Work







At Work

These mechanics work in manufacturing industries and for utilities, construction contractors, retail organizations, railways, airlines, aircraft maintenance and overhaul companies, and other organizations.

- Construction millwrights and industrial mechanics install and repair stationary industrial machinery.
- Heavy-duty equipment mechanics repair and maintain construction, forestry, mining, material handling and other heavy equipment.
- Refrigeration and air conditioning mechanics install and repair refrigeration, central air conditioning and combined cooling and heating systems in homes, businesses and industry.
- Railway carmen/women inspect and repair railway cars.
- Aircraft mechanics maintain and repair aircraft structures and mechanical and hydraulic systems.
- Aircraft inspectors inspect aircraft and aircraft systems to ensure they meet standards.
- Machine fitters fit, assemble and build heavy industrial machinery and transportation equipment.
- Elevator constructors and mechanics install and repair freight and passenger elevators, escalators and moving walkways.

Education, Training & Experience

- These mechanics usually require secondary school education. Most recent entrants have a trade/vocational certificate or a community college diploma.
- To gain trade certification, elevator constructors and mechanics and refrigeration and air conditioning mechanics must complete a three- to five-year apprenticeship program or have a combination of experience and formal education in their specialty.
- Railway carmen/women and machine fitters must serve an apprenticeship or have on-the-job training.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 7311, 7312, 7315
Part 2 Field of Study Cross-index: T314, C315, T315, T383, T333

NOC 731

In These Occupations...

- 169,000 people were employed in 1998, an increase of 4.6% from 1988. After declining 6.4% over the 1988 to 1993 period, employment increased 11.7% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 44% are construction millwrights and industrial mechanics; 27% are heavy-duty equipment mechanics; 10% are aircraft mechanics and aircraft inspectors; and 9% are refrigerator and air conditioning mechanics.
- 2% work part-time, well below the average of 19% for all occupations.
- 4% are self-employed, well below the average of 17% for all occupations.
- 1% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 4.5% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations in the trades, transport and equipment operation sectors.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations but are comparable to other occupations in the trades, transport and equipment operation sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the construction, non-electrical machinery and wholesale trade industries.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	45 436	57 573	60 056
Average	33 585	44 068	47 188
Lowest 20%	21 876	31 333	34 156

Age Group

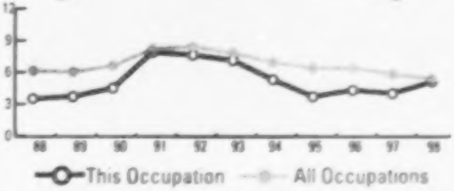
Overall Average for All Ages (15+)

This Occupation	All Occupations
44 176	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

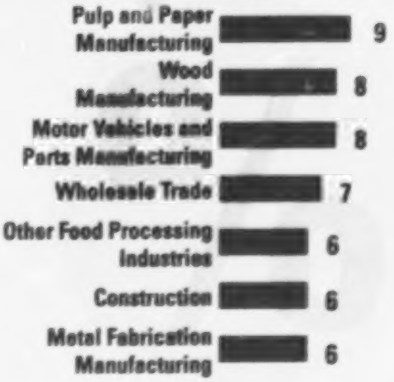
Unemployment Rate

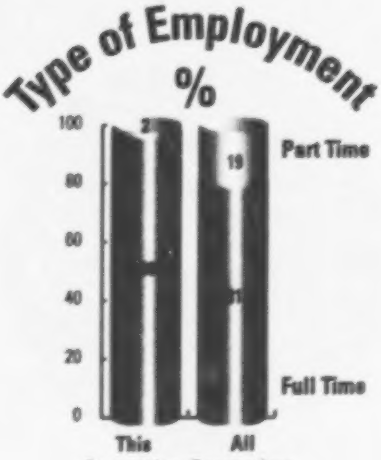


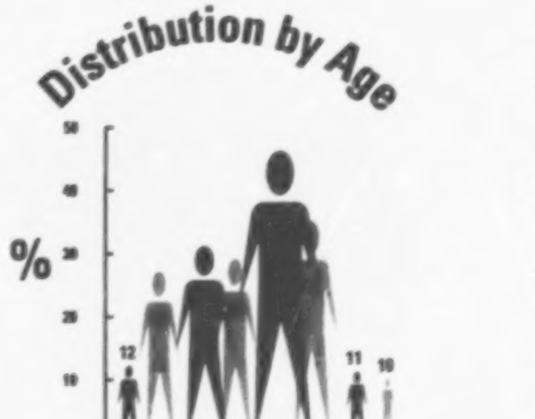
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Construction Millwrights and Industrial Mechanics (Except Textile)

Where They Work







At Work

Construction millwrights are employed by millwrighting contractors and mostly do the initial installation of industrial plant equipment. Industrial mechanics work in manufacturing plants, utilities and other industrial organizations to maintain and repair equipment after installation. Their duties may require them to:

- read diagrams and schematic drawings to determine work procedures;
- install stationary industrial machinery and mechanical equipment according to plans;
- operate hoisting and lifting devices to position machinery and parts during installation, set-up and repair of machinery;
- inspect, clean, repair and maintain machinery;
- operate machine tools such as lathes and grinders to fabricate parts for overhaul, maintenance or set-up of machinery; and
- construct foundations for machinery or direct other workers to construct foundations.

Education, Training & Experience

- People in this group usually require secondary school education. Most recent entrants have a trade/vocational certificate or a community college diploma.
- To gain trade certification, they must usually either complete a three- to four-year apprenticeship program or have a combination of over five years' work experience in the trade and some high school, college or industry courses in industrial machinery repair or millwrighting.
- Industrial mechanic trade certification is compulsory in Quebec and available, but voluntary, in all other provinces and territories.
- Construction millwright trade certification is available, but not compulsory, in New Brunswick, Ontario and Prince Edward Island.
- Qualified industrial mechanics and millwrights may also obtain interprovincial (Red Seal) trade certification which provides job mobility throughout the country.
- With experience, people in this group may progress to supervisory positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 731
Part 2 Field of Study Cross-index: C315, T362, T314, T383, T315

NOC 7311

In These Occupations...

- 74,000 people were employed in 1998, an increase of 2.1% from 1988. After declining 12.0% over the 1988 to 1993 period, employment increased 16.0% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 2% work part-time, well below the average of 19% for all occupations.
- 2% are self-employed, well below the average of 17% for all occupations.
- 1% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 5.1% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations in the trades, transport and equipment operation sectors.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations and for other occupations in the trades, transport and equipment operation sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since earnings are well above average and employment opportunities are at the average level.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- New technologies may adversely affect demand for millwrights, as many of these technologies use electronics technicians rather than millwrights. Millwrights are becoming more productive with advances in measuring devices; however, they must have the skills required to use these devices.
- The increasing complexity of mechanical systems also increases the skill requirements of this occupation.
- The increase in employment requirements through 2004 for this occupation is expected to occur across a broad range of industries, with much of the increase in the non-electrical machinery and construction industries.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	46 190	60 778	63 341
Average	35 084	47 113	50 262
Lowest 20%	22 948	33 564	36 965

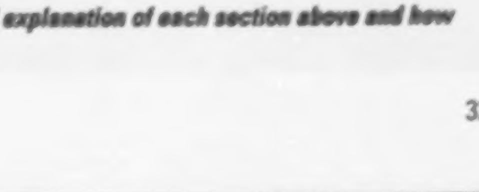
Overall Average for All Ages (15+)

This Occupation	All Occupations
47 708	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

Unemployment Rate



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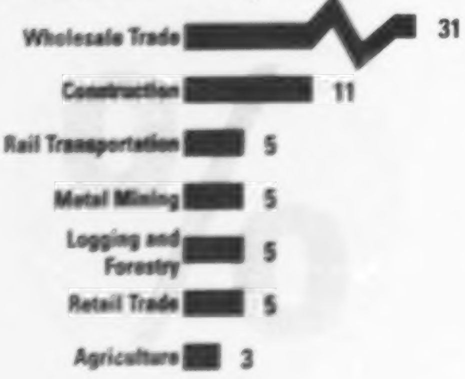
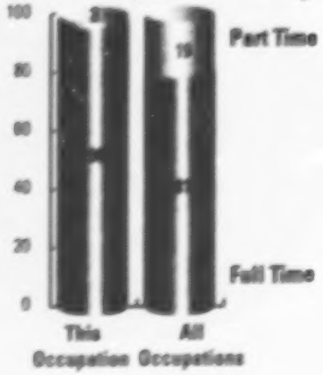
Heavy-Duty Equipment Mechanics

Where They Work

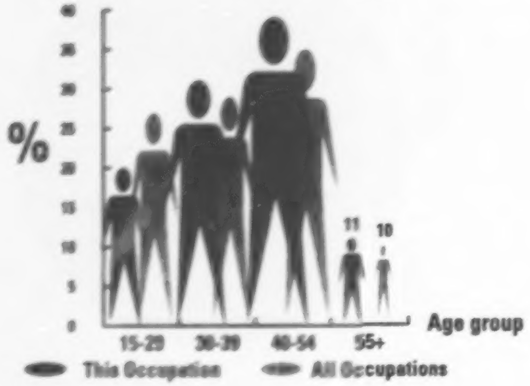


Type of Employment

%



Distribution by Age



At Work

Heavy-duty equipment mechanics work for companies that use, rent or service bulldozers, cranes, graders and other heavy equipment for construction, forestry, farming, mining, oil and gas, material handling, landscaping, land clearing and other activities. Their duties may require them to:

- clean, lubricate and maintain equipment; and
- test, diagnose malfunctions and adjust or repair equipment to meet manufacturers' specifications.

Education, Training & Experience

- Heavy-duty equipment mechanics usually require secondary school education. Most recent entrants have a trade/vocational certificate or a community college diploma.
- To gain trade certification, they usually either complete a three- to five-year apprenticeship program or have a combination of over four years' work experience in the trade and some high school, college or industry courses in heavy equipment repair.
- Heavy-duty equipment mechanic trade certification is compulsory in Quebec and Alberta and available, but voluntary, in all other provinces and territories.
- Farm equipment mechanic trade certification is available, but voluntary, in all provinces except Quebec and the territories.
- Heavy equipment and farm equipment mechanics may obtain interprovincial (Red Seal) trade certification which provides job mobility throughout the country.
- Mine equipment mechanics in Nova Scotia may have to complete a mine equipment repair apprenticeship program and trade certification.
- With experience, heavy-duty equipment mechanics may progress to supervisory positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 731
Part 2 Field of Study Cross-index: T314, T313, T315, C315, T362

NOC 7312

In These Occupations...

- 46,000 people were employed in 1998, an increase of 3.6% from 1988. This reflects an increase of 1.5% from 1988 to 1993 and 2.0% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 3% work part-time, well below the average of 19% for all occupations.
- 7% are self-employed, compared to an average of 17% for all occupations.
- 2% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 4.7% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations in the trades, transport and equipment operation sectors.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations and for other occupations in the trades, transport and equipment operation sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- The Canadian Association of Equipment Distributors (CAED) has a different view of labour market conditions in this occupation. According to the CAED, conditions for heavy-duty equipment mechanics are currently good and will improve further through 2004, due to substantial employment growth, a high retirement rate among experienced mechanics and the small number of graduates entering the occupation.
- These mechanics increasingly work with computerized machinery and need to have the skills this work requires. Many mechanics also need good communications skills, as they work directly with clients.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the wholesale trade and construction industries.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	44 146	54 063	58 527
Average	32 442	41 816	44 413
Lowest 20%	20 990	28 635	30 859

Age Group

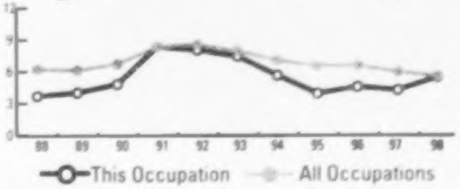
Overall Average for All Ages (15+)

This Occupation	All Occupations
40 915	37 400

Work Prospects

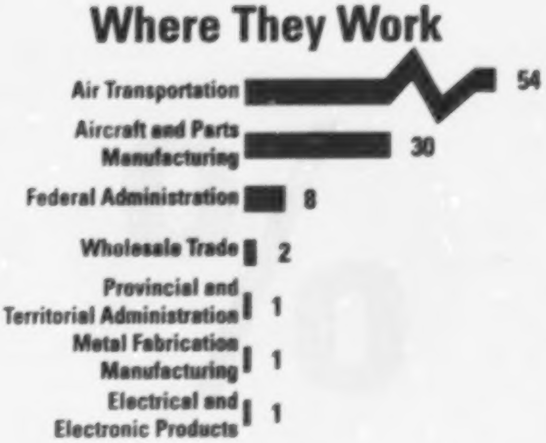
CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

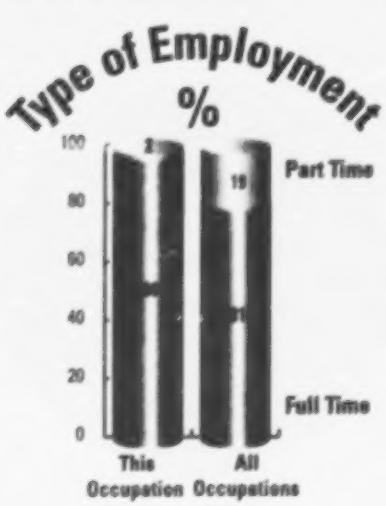
Unemployment Rate

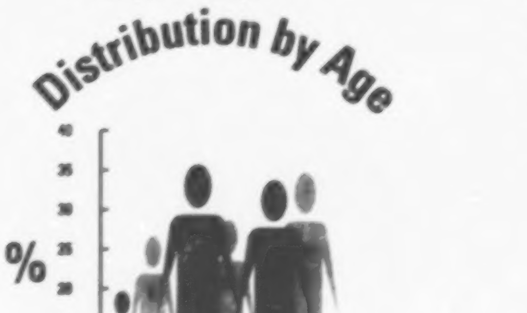


Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Aircraft Mechanics and Aircraft Inspectors







At Work

People in this group are employed by aircraft manufacturers, maintenance and overhaul organizations, and airlines and other aircraft operators.

- Aircraft mechanics install, maintain, repair and overhaul aircraft structures and mechanical and hydraulic systems. They may specialize in specific aircraft systems such as engines, airframes or hydraulic systems, particularly in large organizations.
- Aircraft inspectors inspect aircraft and aircraft systems following manufacture, modification, maintenance, repair or overhaul.

Education, Training & Experience

- People in this group usually require a secondary school education. Most recent entrants have a trade/vocational certificate or a community college diploma.
- Completing a college program makes it easier to enter the industry.
- Voluntary trade certification is available from the Canadian Aviation Maintenance Council.
- A four-year apprenticeship program is available in the Northwest Territories.
- Aircraft mechanics must have several years' on-the-job training. Those who sign maintenance releases also require an Aircraft Maintenance Engineer (AME) licence issued by Transport Canada.
- With experience, aircraft mechanics may progress to supervisory positions or, if they have an AME licence, they may become aircraft inspectors.
- Aircraft inspectors need several years' experience as aircraft mechanics and an Aircraft Maintenance Engineer (AME) licence with endorsements for specific aircraft types and aircraft systems issued by Transport Canada. They may acquire further endorsements to this licence to inspect and certify a broader range of aircraft and aircraft systems.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 731
Part 2 Field of Study Cross-index: U316, C362, T362, T314, T315

NOC 7315

In These Occupations...

- 17,000 people were employed in 1998, an increase of 31.6% from 1988. This reflects an increase of 14.5% from 1988 to 1993 and 14.9% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 2% work part-time, well below the average of 19% for all occupations.
- 3% are self-employed, well below the average of 17% for all occupations.
- 3% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 2.7% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for technical, paraprofessional and skilled occupations and for occupations in the trades, transport and equipment operation sectors.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations and for other occupations in the trades, transport and equipment operation sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since employment opportunities are well above average, although earnings are at the average level.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- The skill level required of these mechanics will increase, as aircraft mechanical and control systems become more and more complex and increasingly computerized.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	43 570	51 584	57 141
Average	34 390	42 709	46 858
Lowest 20%	24 189	34 321	38 007

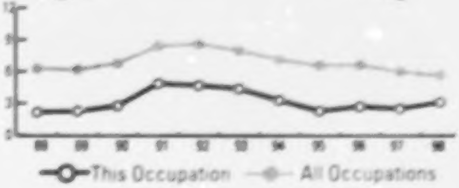
Overall Average for All Ages (15+)

This Occupation	All Occupations
43 224	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

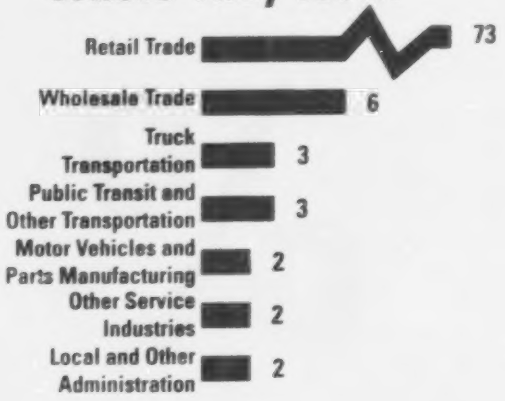
Unemployment Rate



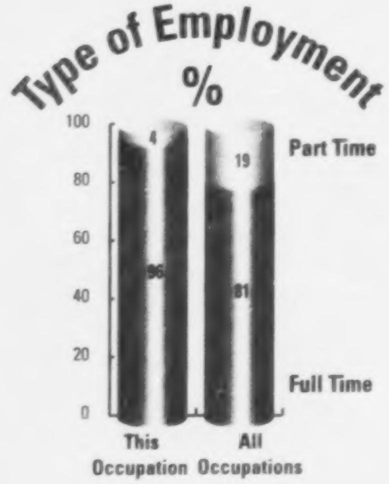
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Motor Vehicle Mechanics

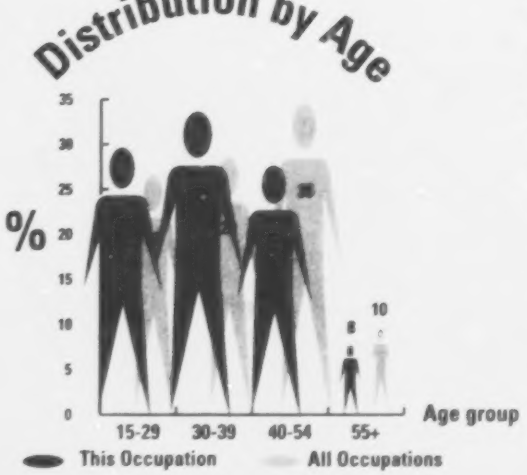
Where They Work



Type of Employment



Distribution by Age



At Work

Automotive service technicians, truck and transport mechanics, mechanical repairers and motor vehicle body repairers work for motor vehicle dealers, garages and service stations, automotive specialty and retail organizations, motor vehicle manufacturers, automobile body repair companies and appraisal centres, public transit authorities and trucking firms.

- Motor vehicle mechanics and technicians inspect, diagnose, repair and service mechanical, electrical and electronic systems and components of cars, buses and trucks. They may specialize in areas such as brakes, air conditioning, cooling and heating systems, transmission systems or diagnostic services.
- Mechanical repairers inspect, repair, test and adjust mechanical units of newly assembled motor vehicles. Metal repairers repair vehicle body damage in assembly plants.
- Motor vehicle body repairers and refinishers repair and restore damaged motor vehicle parts and the exterior finish of vehicles.

Education, Training & Experience

- People in this occupational group usually have a high school diploma, although most provinces require only Grade 10 for entry. Most recent entrants have a trade/vocational certificate or a community college diploma.
- To gain trade certification, automotive service technicians and other motor vehicle mechanics and technicians must complete a four-year apprenticeship program.
- To gain trade certification, motor vehicle body repairers and refinishers usually complete a three- to four-year apprenticeship or have a combination of three years' experience and a high school or college automotive body repair program.
- Trade certification is compulsory in some provinces, but voluntary in others.
- Qualified automotive service technicians, motor vehicle mechanics, technicians, truck and transport mechanics, truck trailer repairers, automotive painters, body repairers and refinishers may also obtain interprovincial (Red Seal) trade certification which provides job mobility throughout the country.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 7321
Part 2 Field of Study Cross-index: T313, C315, T312, T314, T315

NOC 732

- Mechanical repairers in the motor vehicle manufacturing industry require two to three years' on-the-job training while motor vehicle metal repairers require one to two years' on-the-job training in body repair.

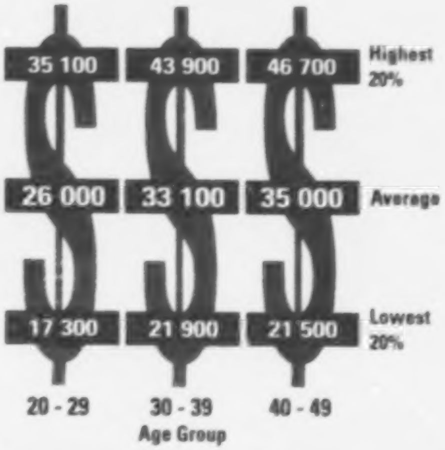
In These Occupations...

- 156,000 people were employed in 1998, an increase of 9.2% from 1988. Most of the growth occurred from 1993 to 1998, when employment increased 7.2%. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 79% are automotive service technicians and other motor vehicle mechanics, technicians and mechanical repairers and 21% are motor vehicle body repairers.
- 4% work part-time, well below the average of 19% for all occupations.
- 13% are self-employed, compared to an average of 17% for all occupations.
- 2% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 6.0% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations and for other occupations in the trades, transport and equipment operation sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- The increasing complexity of motor vehicle mechanical systems is leading to increased educational and skill requirements in these occupations. A shift to team-based operations also requires new skills.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the retail trade industry.

Earnings



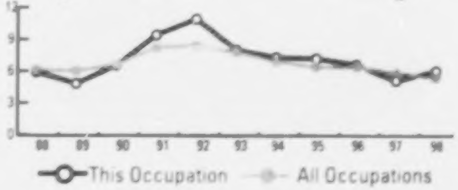
Overall Average for All Ages (15+)

37 700	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

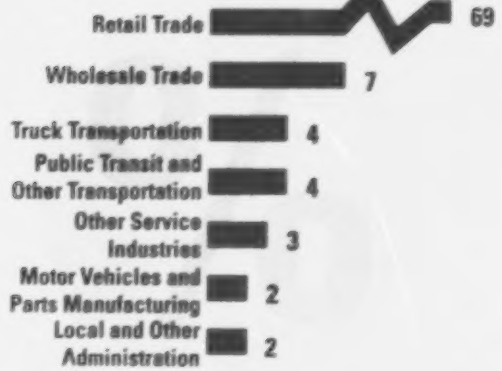
Unemployment Rate



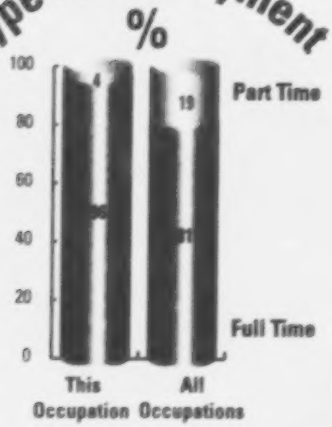
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Motor Vehicle Mechanics, Technicians and Mechanical Repairers

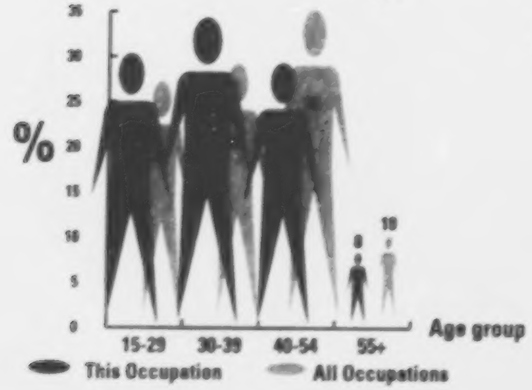
Where They Work



Type of Employment



Distribution by Age



At Work

Automotive service technicians and truck and transport mechanics are employed by motor vehicle dealers, garages and service stations, automotive specialty shops, public transit authorities and trucking firms. Mechanical repairers are employed by motor vehicle manufacturing companies.

- Motor vehicle mechanics and technicians inspect, diagnose, repair and service mechanical, electrical and electronic systems and components of cars, buses and trucks and may specialize in specific motor vehicle systems.
- Mechanical repairers perform major repairs and replacement of mechanical units on newly assembled motor vehicles.

Education, Training & Experience

- People in this occupation usually require secondary school education. Most recent entrants have a trade/vocational or community college diploma.
- To gain trade certification, automotive service technicians and other motor vehicle mechanics and technicians must complete a four-year apprenticeship program.
- Trade certification for various automotive service specialties and truck mechanics is often available and may be required in some jurisdictions.
- Truck and transport mechanic trade certification is compulsory in Nova Scotia and Ontario and available, but voluntary, in Newfoundland, Prince Edward Island, New Brunswick, Quebec, Manitoba, Saskatchewan, British Columbia, and the Yukon.
- Qualified motor vehicle body mechanics, automotive service technicians and body repairers and painters, as well as truck and transport mechanics and truck trailer repairers, may obtain interprovincial (Red Seal) trade certification which provides job mobility throughout the country.
- Mechanical repairers usually receive two to three years' on-the-job training.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 732
Part 2 Field of Study Cross-index: T312, T313, T314, T315

NOC 7321

In These Occupations...

- 123,000 people were employed in 1998, an increase of 9.3% from 1988. Most of the growth occurred from 1993 to 1998, when employment increased 8.8%. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 4% work part-time, well below the average of 19% for all occupations.
- 11% are self-employed, compared to an average of 17% for all occupations.
- 2% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 5.2% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations in the trades, transport and equipment operation sectors.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations and for other occupations in the trades, transport and equipment operation sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Increasingly complex motor vehicle systems, such as electronic systems, and use of propane vehicles are examples of the trends which are increasing educational and skill requirements in this occupation. A shift to team-based repair operations also requires new skills.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the retail trade industry.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	35 700	44 300	46 900
Average	26 500	33 600	35 700
Lowest 20%	17 900	22 600	22 800

Age Group

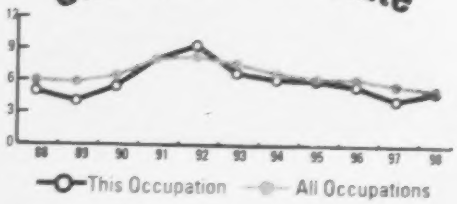
Overall Average for All Ages (15+)

38 300	37 400
This Occupation	**All Occupations**

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate



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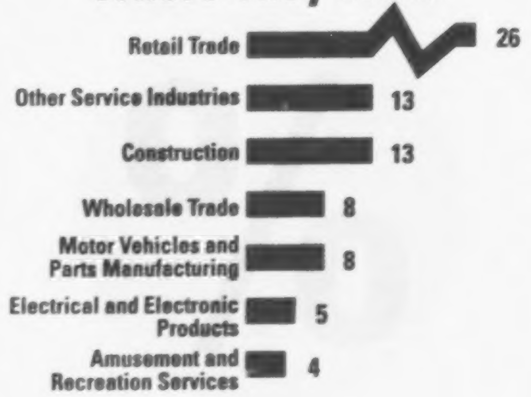
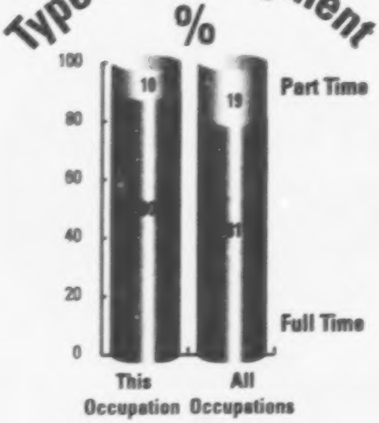
Other Mechanics

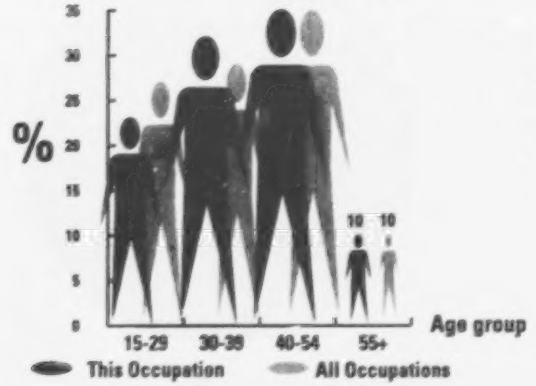
Where They Work



Type of Employment



Distribution by Age



At Work

These mechanics work in heating systems installation and service companies; appliance service companies; electrical and other repair shops; electrical equipment manufacturers service shops; maintenance and repair departments of retail, wholesale and manufacturing companies; motorcycle dealers; and independent service organizations.

- Oil and solid fuel heating mechanics install and maintain oil, coal and wood heating systems in residential and commercial buildings.
- Electric appliance servicers and repairers service and repair domestic appliances.
- Electrical mechanics maintain, test and repair electric motors, transformers, switchgears and other electrical apparatus. They may specialize in particular functions or products.
- Motorcycle and other related mechanics test, repair and service motorcycles, snowmobiles, forklifts and similar vehicles.
- Other small-engine and equipment mechanics test, repair and service small gasoline- and diesel-powered equipment such as outboard motors and lawn mowers.

Education, Training & Experience

- People in this group usually require secondary school education. Most recent entrants have a trade/vocational certificate or a community college diploma.
- To gain trade certification, oil and solid fuel heating, electrical, motorcycle, small-engine and equipment mechanics and repairers usually have a three- to four-year apprenticeship or a combination of experience and college or other courses.
- They may need trade certification in their province of work.
- Most mechanics may also obtain interprovincial (Red Seal) trade certification which provides job mobility throughout the country.
- Small appliance repairers and other small-engine and equipment mechanics usually require on-the-job training and college or other courses.

Check out the 'big picture' in "World of Work: Overviews and Trends"

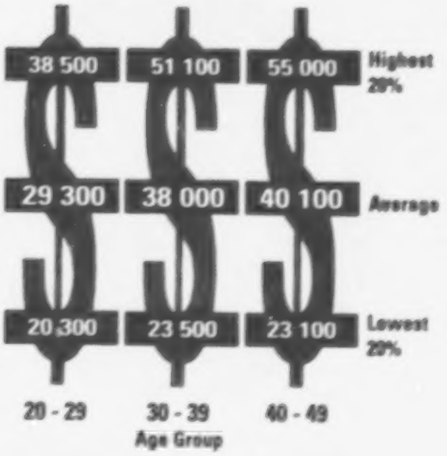
In These Occupations...

- 21,000 people were employed in 1998, a decrease of 2.1% from 1988. After rising 5.9% over the 1988 to 1993 period, employment decreased 7.5% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 31% are electrical appliance servicers and repairers; 25% are electrical mechanics; and 24% are small-engine and equipment mechanics.
- 10% work part-time, compared to an average of 19% for all occupations.
- 27% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 3% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 7.5% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for technical, paraprofessional and skilled occupations.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations and for other occupations in the trades, transport and equipment operation sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the retail trade and construction industries.

Earnings



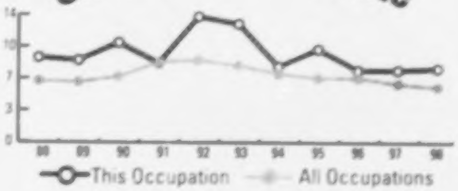
Overall Average for All Ages (15+)

37 100	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

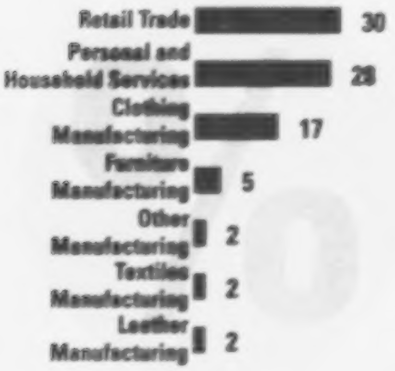
Unemployment Rate

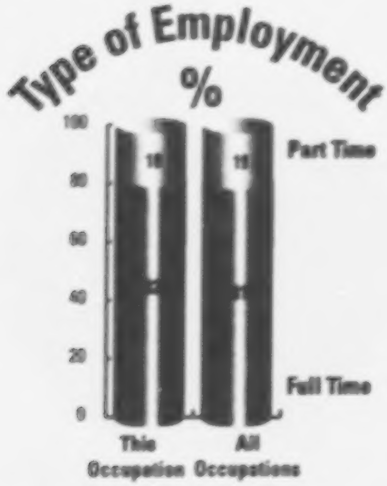


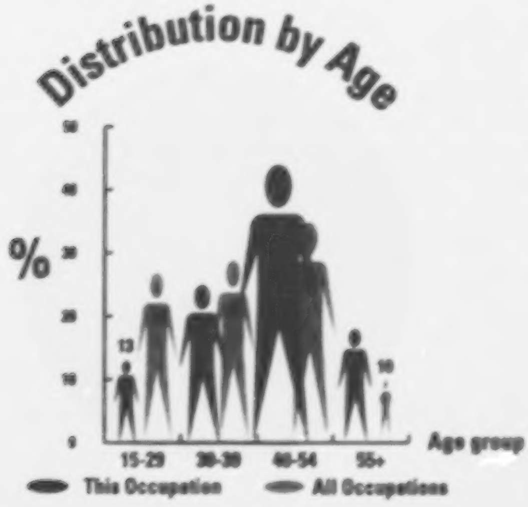
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Upholsterers, Tailors, Shoe Repairers, Jewellers and Related Occupations

Where They Work







At Work

People in this group work in furniture, aircraft, motor vehicle, garment, jewellery, clock and watch manufacturing companies; furniture repair shops; retail stores; clothing alteration shops; shoe, jewellery and watch repair shops; and custom shoemaking establishments. They may also be self-employed.

- Upholsterers cover furniture, fixtures and other items with materials, and install upholstery in aircraft, motor vehicles, railway cars and marine vessels.
- Tailors and dressmakers make made-to-measure garments and alter and repair garments.
- Furriers make, restyle and repair natural fur garments and accessories.
- Milliners design and make hats and related accessories.
- Seamstresses make alterations and repairs to garments and other items.
- Shoemakers make specialized custom shoes and boots.
- Shoe repairers restore footwear, purses, luggage and other items.
- Jewellers fabricate, assemble and appraise fine jewellery and other items.
- Watch repairers mend and make clocks and watches.

Education, Training & Experience

- People in these occupations usually require some high school education or a high school diploma. Many recent entrants have a high school diploma.
- They may need college or other courses in their field, an apprenticeship, several years' experience, on-the-job training or demonstrated sewing and creative skills.
- Furriers require several years' experience in selecting pelts.
- Shoemakers must have extensive on-the-job training.
- Watch repairers require certification in Quebec and Ontario.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: T040, C040, T381

NOC 734

In These Occupations...

- 41,000 people were employed in 1998, a decrease of 10.7% from 1988. However, after declining 19.6% over the 1988 to 1993 period, employment increased 11.1% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 61% are tailors, dressmakers, furriers and milliners and 19% are upholsterers.
- 18% work part-time, compared to an average of 19% for all occupations.
- 41% are self-employed, well above the average of 17% for all occupations.The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 63% are women, well above the average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 7.2% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the lowest for technical, paraprofesionnal and skilled occupations and for occupations in the trades, transport and equipment operation sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited" as a result of large long-term employment losses.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the personal and household services and retail trade industries.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	32 200	44 000	44 200
Average	24 300	30 800	31 000
Lowest 20%	14 900	15 700	13 600

Age Group

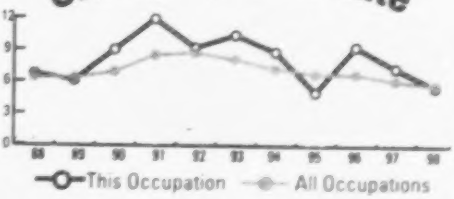
Overall Average for All Ages (15+)

This Occupation	All Occupations
23 500	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

Unemployment Rate



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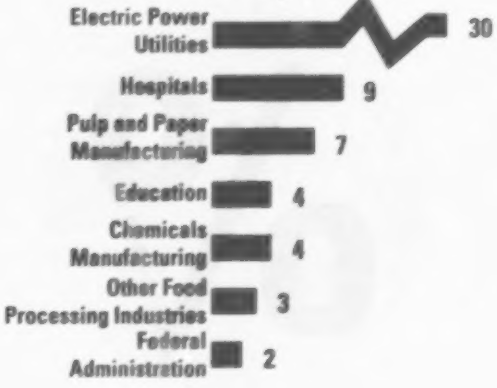
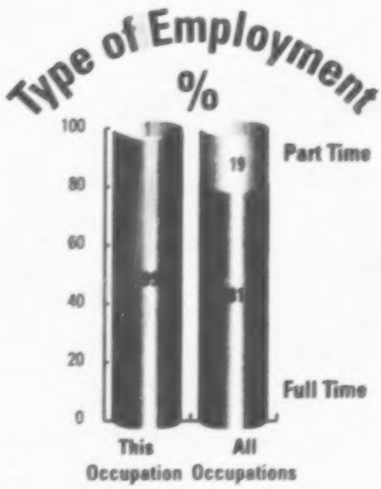
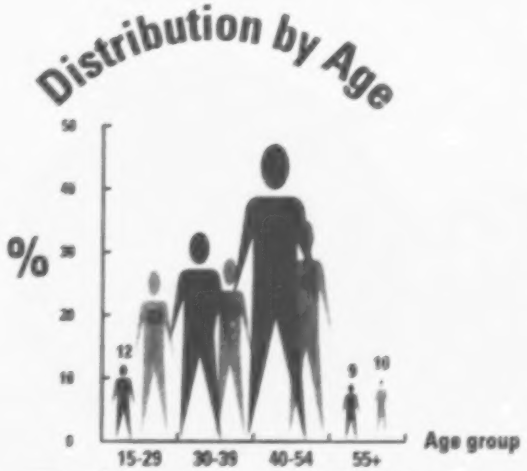
Stationary Engineers and Power Station and System Operators

Where They Work







At Work

People in this group work in industrial and manufacturing plants, hospitals, universities, government and commercial organizations, electric power utilities and large manufacturing facilities.

- Stationary engineers and auxiliary equipment operators maintain and operate stationary engines and auxiliary equipment such as boilers, turbines, generators, compressors, and other equipment to provide heat, ventilation, refrigeration, light and power for buildings and industrial plants.
- Power system operators monitor and operate computerized or pneumatically controlled switchboards and auxiliary equipment in electrical control centres to control and regulate electrical power in transmission networks.
- Power station operators run reactors, turbines, boilers, generators, condensers and auxiliary equipment in hydro, thermal and nuclear power plants to generate electric power.

Education, Training & Experience

- People in this group usually have a high school diploma and specialized training. Most recent entrants have a trade/vocational certificate or a community college diploma.
- Stationary engineers and auxiliary equipment operators must complete an apprenticeship program in stationary or power engineering, or on-the-job training and high school courses, or a college training program in stationary or power engineering. They also require provincial or territorial certification.
- Power system operators must complete a three- to five-year apprenticeship or have more than three years' experience and some college or industry courses in electrical and electronic technology.
- Power station operators must complete an apprenticeship in stationary or power engineering, or have several years' experience and some high school, correspondence or college courses in stationary or power engineering. They also require provincial or territorial certification.

Check out the 'big picture' in "World of Work: Overviews and Trends"

NOC 735

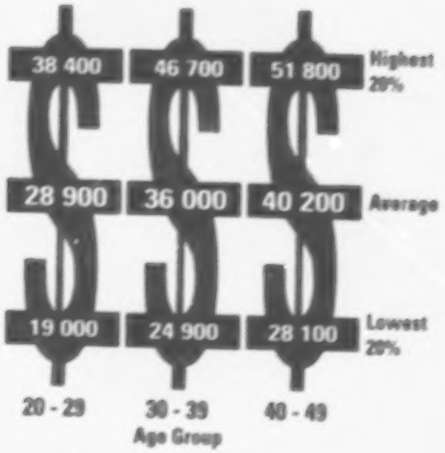
In These Occupations...

- 37,000 people were employed in 1998, an increase of 5.6% from 1988. However, after rising 5.6% over the 1988 to 1993 period, employment decreased 0.1% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 74% are stationary engineers and auxiliary equipment operators and 26% are power system and power station operators.
- 1% work part time, well below the average of 19% for all occupations.
- 1% are self-employed, well below the average of 17% for all occupations.
- 4% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 2.5% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for technical, paraprofessional and skilled occupations and for occupations in the trades, transport and equipment operation sectors.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations and for occupations in the trades, transport and equipment operation sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities and earnings are both well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Restructuring of the electric power industry could have an impact on employment opportunities for workers in these occupations.
- Employment requirements for these occupations are expected to increase through 2004 across a broad range of industries, with much of the increase in the electrical power industry and hospitals.

Earnings



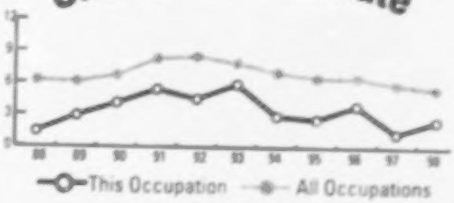
Overall Average for All Ages (15+)

47 100	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	**GOOD**
FAIR	FAIR
LIMITED	LIMITED

Unemployment Rate



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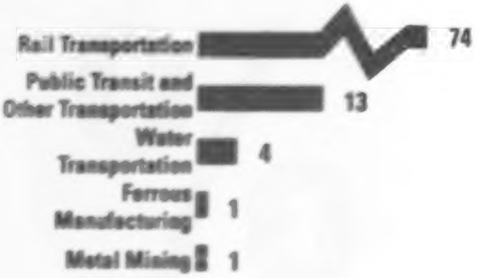
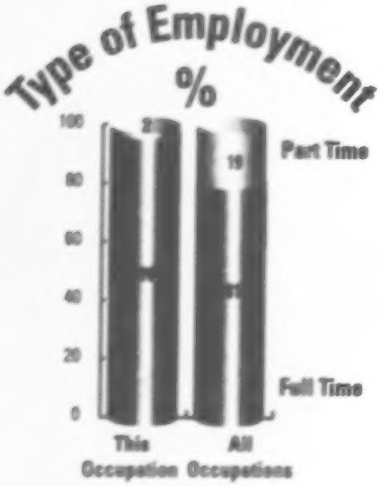
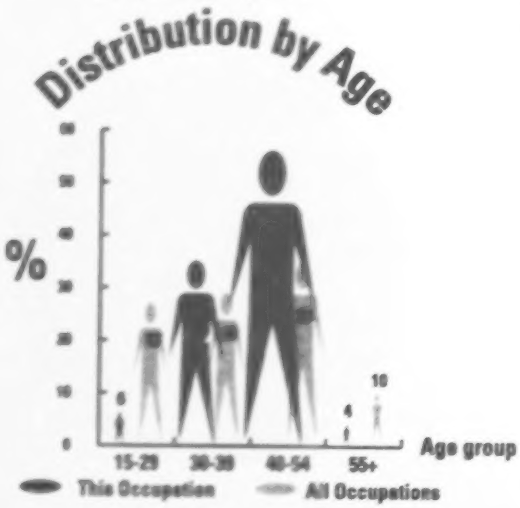
Train Crew Operating Occupations

Where They Work







At Work

People in this group work for railway transport companies and industrial and commercial users of rail transport.

- Railway locomotive engineers transport passengers and freight on railways. They operate communication systems to communicate with train crews and railway traffic controllers to ensure that trains operate safely and meet their schedules.
- Yard locomotive engineers switch, couple and uncouple cars for loading and unloading goods within the yards of railway, industrial and other organizations.
- Railway conductors coordinate and supervise the activities of passenger and freight crew members, except for railway locomotive engineers, to ensure that trains operate according to schedules, orders and operating rules. They also collect fares, announce train stops and answer passengers' questions.
- Railway brakemen/women check train brakes and other systems and equipment prior to train runs and assist railway conductors in activities en route.

This occupational group also includes railway hostlers; switch engineers; freight, passenger and railway conductors; and road freight, front-end and tail-end brakemen/women.

Education, Training & Experience

- People in this group usually need a high school diploma. Many recent entrants have a high school diploma.
- Except for yard locomotive engineers, they require specific levels of the Certificate of the Canadian Rail Operating Rules.
- Railway locomotive engineers must have experience as railway conductors.
- Yard locomotive engineers may need experience as railway conductors or railway yard workers.
- Railway conductors must have experience as railway brakemen/women.
- Railway brakemen/women usually require experience as railway workers.

Check out the 'big picture' in "World of Work: Overviews and Trends"

In These Occupations...

- 13,000 people were employed in 1998, a decrease of 18.8% from 1988. This reflects a decrease of 12.3% from 1988 to 1993 and 7.5% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 53% are railway and yard locomotive engineers and 47% are railway conductors and brakemen/women.
- 2% work part-time, well below the average of 19% for all occupations.
- 1% are self-employed, well below the average of 17% for all occupations.
- 4% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 1.6% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for technical, paraprofessional and skilled occupations and for occupations in the trades, transport and equipment operation sectors.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations and for occupations in the trades, transport and equipment operation sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited" as a result of large long-term employment losses.
- Over the next five years, this outlook is not expected to change, as employment losses are expected to continue.
- The restructuring of Canadian National and Canadian Pacific is expected to continue, with a negative impact on demand for these workers. Consequently, chances of new entrants obtaining jobs in these occupations are limited. Short-line railway operations are likely to take over some of the track abandoned by the larger lines, but typically operate with smaller crews.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	42 500	58 900	58 000
Average	35 600	47 900	47 700
Lowest 20%	27 100	36 200	36 600

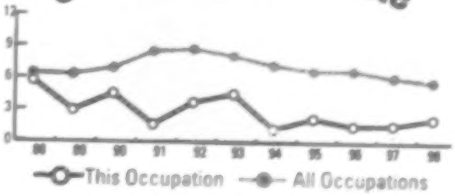
Overall Average for All Ages (15+)

This Occupation	All Occupations
53 800	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

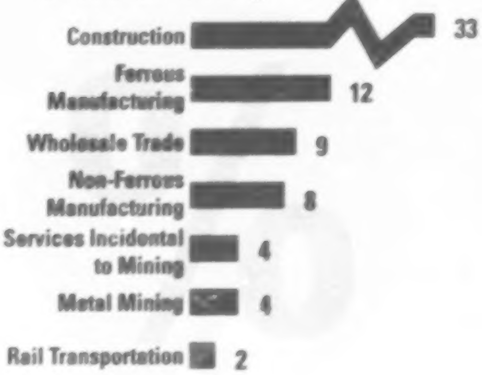
Unemployment Rate



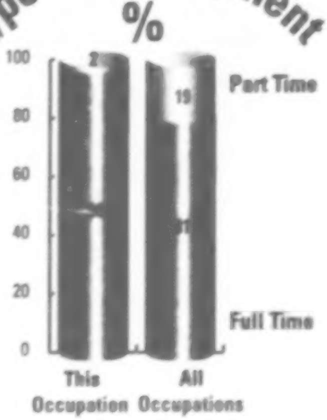
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Crane Operators, Drillers and Blasters

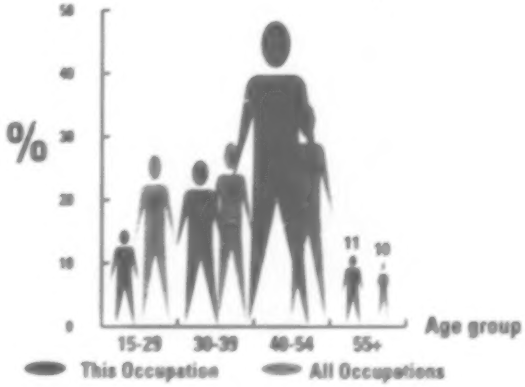
Where They Work



Type of Employment



Distribution by Age



At Work

People in this group work for government and for construction, mining, quarrying, industrial, cargo handling and railway companies and contractors.

- Crane operators use cranes and draglines to lift and place machinery and other large objects at work sites.
- Drillers operate mobile drilling machines to bore blast holes in open-pit mines and quarries and during the construction of building foundations.
- Blasters place explosives in blast holes and detonate explosives to dislodge coal, ore and rock and to demolish structures.
- Water well drillers operate mobile well drilling rigs and equipment to drill residential, commercial and industrial water wells.

Education, Training & Experience

- People in this group usually have some high school education. Many recent entrants have a trade/vocational certificate or a community college diploma.
- Crane operators require an apprenticeship of one to three years or crane operation courses.
- In some provinces, crane, boom truck and mobile and tower crane operators require trade certification.
- Mobile crane operators may require a licence to drive on public roads. If they have trade certification, they may also obtain interprovincial (Red Seal) trade certification which provides job mobility throughout the country.
- Drillers may require heavy equipment operator experience and on-the-job training.
- Blasters usually require a blasting licence and may need experience as blaster helpers in surface mining and quarrying. They usually get on-the-job training.
- To gain trade certification, water well drillers require a two- to three-year apprenticeship or two to three years' experience with trade courses.

Check out the 'big picture' in "World of Work: Overviews and Trends"

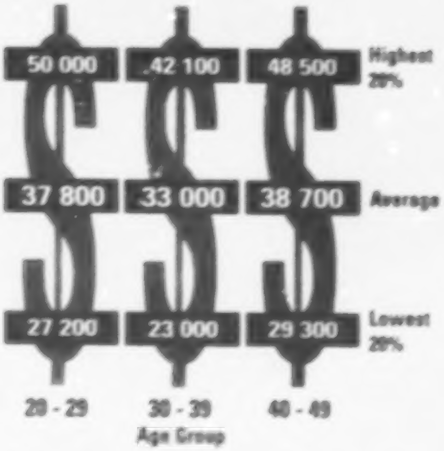
In These Occupations...

- 17,000 people were employed in 1998, a decrease of 12.5% from 1988. However, after declining 15.8% over the 1988 to 1993 period, employment increased 4.0% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 75% are crane operators and 16% are drillers and blasters, in surface mining, quarrying and construction.
- 2% work part-time, well below the average of 19% for all occupations
- 4% are self employed, well below the average of 17% for all occupations.
- 2% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 8.9% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for technical, paraprofessional and skilled occupations.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations and for other occupations in the trades, transport and equipment operation sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited" as a result of large long-term employment losses.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Robotics and computer controls will increase the skill requirements for crane operators, but may also decrease demand for these workers.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the construction industry.

Earnings



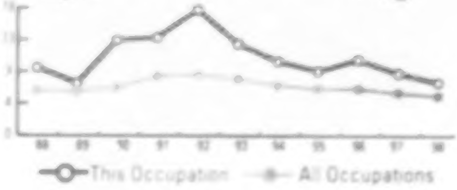
Overall Average for All Ages (15+)

This Occupation	All Occupations
36 900	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

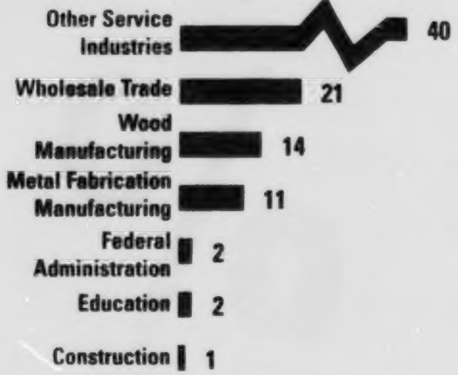
Unemployment Rate



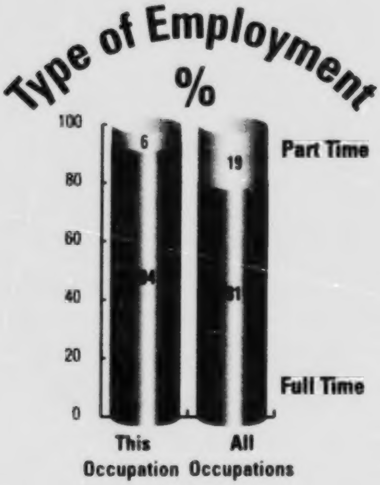
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Printing Press Operators, Commercial Divers and Other Trades and Related Occupations

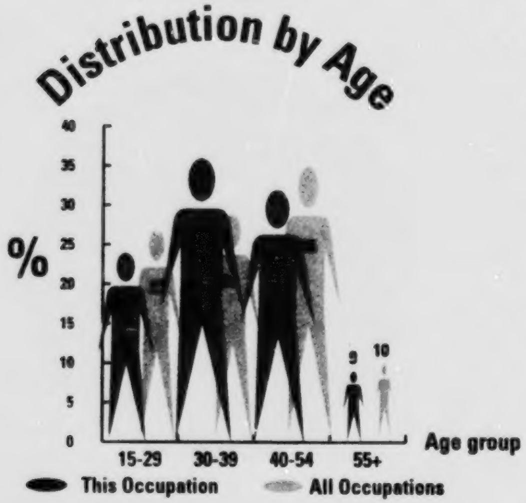
Where They Work



Type of Employment



Distribution by Age



At Work

Printing press operators work for commercial printing companies, newspapers, magazines and other public or private establishments that have in-house printing departments.

- Printing press operators set up and operate sheet and web-fed presses to print illustrations, designs and text on plastic, paper, metals and other materials.
- Commercial divers conduct underwater surveys, non-destructive testing, blasting and welding activities.
- Gunsmiths fabricate guns and repair and modify firearms.
- Locksmiths make keys and repair, install, adjust and change locks.
- Safe and vault servicers install, repair and maintain safes and vaults.
- Saw fitters repair, set and sharpen bandsaws and other types of saws.

Education, Training & Experience

- People in this group usually require secondary school education. Many recent entrants have a high school diploma.
- Printing press operators and other trades need an apprenticeship or a combination of several years' experience and college or other trade courses, or several years' on-the-job training. They may require provincial trade certification or a licence.
- Commercial divers must complete a recognized commercial diving school program and obtain a commercial diver's licence.
- They may require military or police diving experience.
- Commercial divers who use explosives usually have a provincial blaster's licence.
- Recreation vehicle mechanics may also obtain interprovincial (Red Seal) trade certification which provides job mobility throughout the country.

Check out the 'big picture' in "World of Work: Overviews and Trends"

In These Occupations...

- 39,000 people were employed in 1998, a decrease of 5.9% from 1988. However, after declining 14.6% over the 1988 to 1993 period, employment increased 10.1% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 76% are printing press operators.
- 6% work part-time, well below the average of 19% for all occupations.
- 11% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 9% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 5.0% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations in the trades, transport and equipment operation sectors.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations and for other occupations in the trades, transport and equipment operation sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited" as a result of long-term employment losses.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Conditions are likely to vary widely among the many occupations in this group.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the printing and publishing industry.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	32 200	39 600	48 700
Average	24 500	30 200	35 800
Lowest 20%	16 700	20 200	23 000

Age Group

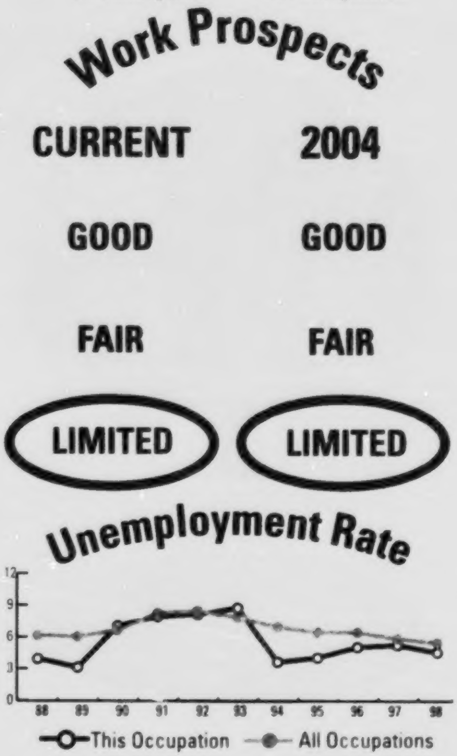
Overall Average for All Ages (15+)

This Occupation	All Occupations
36 000	37 400

Work Prospects

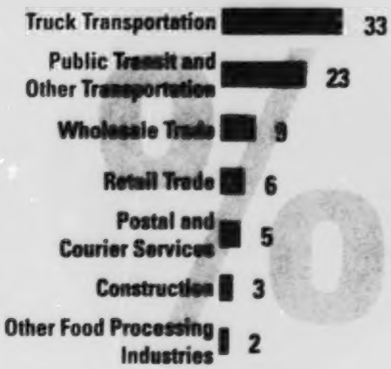
CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

Unemployment Rate

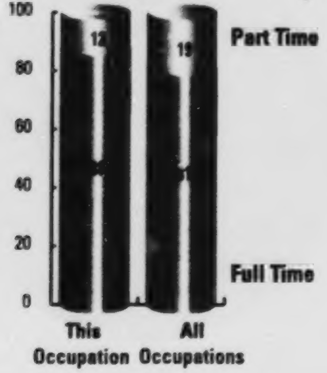


Motor Vehicle and Transit Drivers

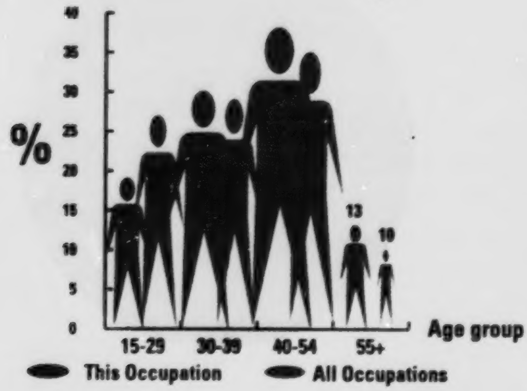
Where They Work



Type of Employment



Distribution by Age



At Work

These drivers work in government and private transportation and transportation service companies, manufacturing and distribution companies, moving and taxi companies, private households and other organizations.

- Truck drivers transport goods within and between cities and towns, provinces and territories and over international routes. They may transport hazardous products or dangerous goods.
- Bus drivers, streetcar drivers and subway and light rail transit operators take passengers along established routes to local destinations.
- Bus drivers also transport passengers and goods to intercity or long-distance points and drive sightseeing tour buses.
- School bus drivers transport students between school and home and on excursions.
- Taxi drivers and limousine drivers take passengers to and from destinations and collect fares.
- Chauffeurs transport family members or business representatives to and from destinations.
- Delivery drivers use automobiles, vans and light trucks to pick up and deliver products.

Education, Training & Experience

- These drivers usually complete some high school or have a high school diploma. Many recent entrants have a high school diploma.
- Taxi and limousine drivers and chauffeurs usually have a minimum of one year of safe-driving experience and an appropriate driver's licence for their vehicle. Taxi drivers usually require municipal permits.
- Delivery drivers usually need one year of safe-driving experience and an appropriate driver's licence for their vehicle.

Check out the 'big picture' in
"World of Work: Overviews and Trends"

Related Occupation(s): 7411, 7412
Part 2 Field of Study Cross-index: T315, T313, T314, T390, C315, C390

NOC 741

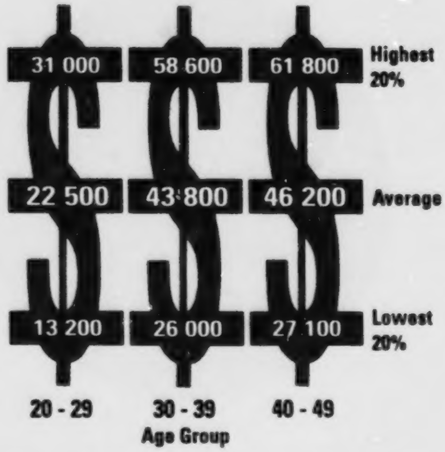
In These Occupations...

- 401,000 people were employed in 1998, an increase of 9.8% from 1988. After declining 2.9% over the 1988 to 1993 period, employment increased 13.1% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 51% are truck drivers; 23% are delivery drivers; and 17% are bus drivers and subway and other transit operators.
- 13% work part-time, well below the average of 19% for all occupations.
- 19% are self-employed, compared to an average of 17% for all occupations.
- 9% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 7.1% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations and for other occupations in the trades, transport and equipment operation sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the public transit and truck transportation industries.

Earnings



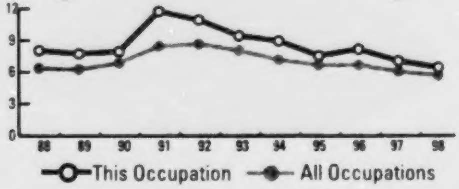
Overall Average for All Ages (15+)

34 300	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate



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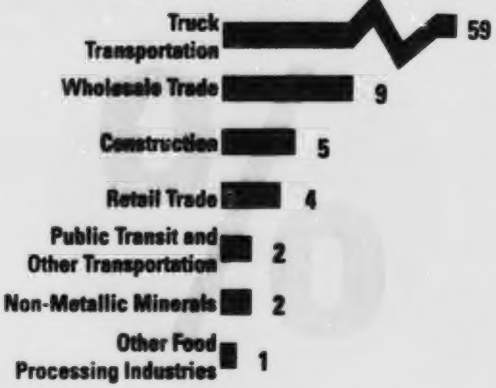
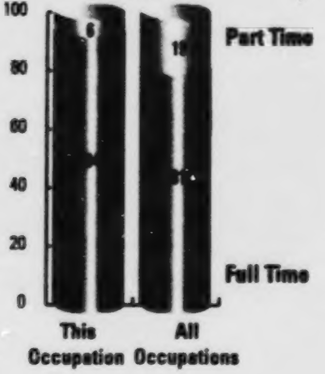
Truck Drivers

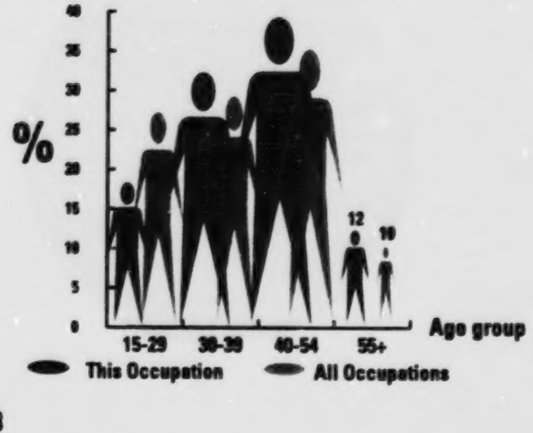
Where They Work



Type of Employment



Distribution by Age



At Work

Truck drivers work for transportation companies, manufacturing and distribution companies and moving companies. They may also be self-employed. Their duties may require them to:

- operate and drive straight or articulated trucks weighing over 4,600 kg with three or more axles to transport goods and materials;
- oversee all aspects of trucking such as condition of equipment, loading and unloading, and safety and security of cargo;
- obtain special permits and other documents required to transport cargo on international routes;
- record cargo information, distance travelled, fuel consumption and other information in a log book or an on-board computer;
- receive and relay information to a central dispatcher;
- drive as part of a team or convoy; and
- transport hazardous products or dangerous goods.

Education, Training & Experience

- Truck drivers must usually complete some high school. Many recent entrants have a high school diploma.
- They must have a driver's licence appropriate to the class of vehicle they are driving.
- Drivers who operate vehicles equipped with air brakes must have air brake endorsements.
- Drivers who deal with hazardous products or dangerous goods must be certified by their employers.
- With experience or additional training, they may progress to supervisory positions or to non-driving occupations such as truck driving instructor, safety officer and truck dispatcher.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 741
Part 2 Field of Study Cross-index: T313, T332, C390

NOC 7411

In These Occupations...

- 206,000 people were employed in 1998, an increase of 17.7% from 1988. After declining 2.0% over the 1988 to 1993 period, employment increased 20.0% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 6% work part-time, well below the average of 19% for all occupations.
- 20% are self-employed, compared to an average of 17% for all occupations.
- 2% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 9.2% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the highest for occupations with similar education/training requirements but are comparable to those for other occupations in the trades, transport and equipment operation sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities are average, although earnings are above the average level for comparable occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Public pressure for improved highway safety, the growing use of satellite positioning systems and the use of more complex rigs are all likely to increase skill requirements for truck drivers. The safety-related trend toward a higher level of log book enforcement means that truck drivers need to be able to fill in complex documentation accurately. Limits to the time drivers are allowed to work may increase demand in this occupation.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the truck transportation industry.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	33 200	61 400	65 700
Average	25 000	47 000	49 600
Lowest 20%	15 700	29 400	31 800

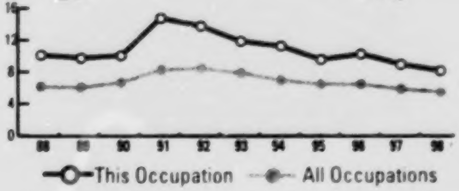
Overall Average for All Ages (15+)

This Occupation	All Occupations
37 200	37 400

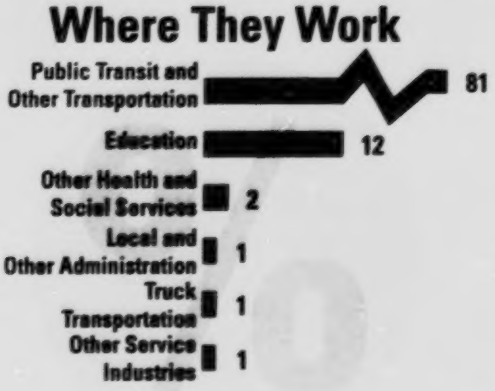
Work Prospects

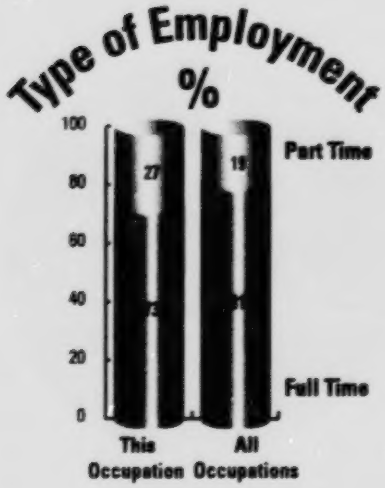
CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

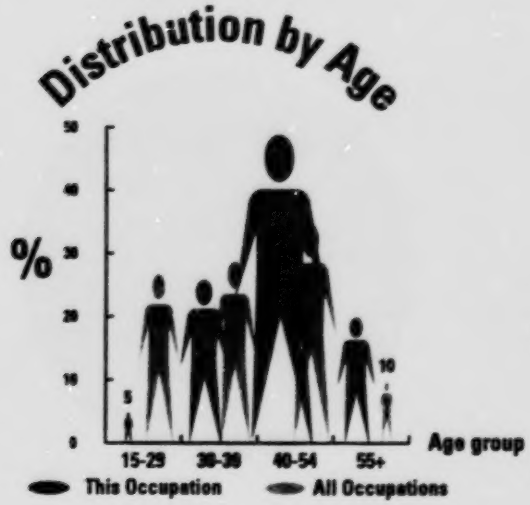
Unemployment Rate



Bus Drivers and Subway and Other Transit Operators


Where They Work


Type of Employment %


Distribution by Age

At Work

People in this occupation work for municipal governments. Bus drivers may also be employed by private transportation companies.

- Bus and streetcar drivers transport passengers to local, intercity or long-distance destinations. They may drive sightseeing tour buses and provide information on points of interest.
- School bus drivers transport children between school and home, and on excursions. They ensure safety when children board and leave buses and cross streets when the bus is stopped.
- Subway train and light rail transit operators, often working in two-person crews, may operate controls and close transit vehicle doors. They may also report delays, malfunctions and accidents to the control unit and direct passengers during emergency evacuation procedures.

Education, Training & Experience

- People in this occupation may have to complete high school and must have a minimum of one year of safe-driving experience. Many recent entrants have a high school diploma.
- They usually receive three months of on-the-job training including classroom instruction.
- Bus drivers require a Class B, C, E or F driver's licence in Ontario and a Class 2 driver's licence elsewhere.
- Subway and light rail transit operators usually must have experience as a public transit bus driver.
- With experience, people in this group may progress to supervisory or inspector positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

In These Occupations...

- 69,000 people were employed in 1998, an increase of 17.2% from 1988. This reflects an increase of 7.7% from 1988 to 1993 and 8.9% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 27% work part-time, compared to an average of 19% for all occupations.
- 4% are self-employed, well below the average of 17% for all occupations.
- 32% are women, well below the average of 45% for all occupations. The proportion of women in this occupation has increased significantly over the last ten years.
- the unemployment rate averaged 7.5% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the highest for occupations with similar education/training requirements but are comparable to other occupations in the trades, transport and equipment operation sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities are average, although earnings are above the average level for comparable occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Demand for local transit services may intensify as road congestion and pollution increase the pressure to reduce the number of personal automobiles on the road. However, government spending restrictions may slow public transit growth. Government spending restrictions may also decrease the demand for school bus drivers.
- Competition from private automobiles and low airfares continues to decrease demand for intercity bus transport.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the public transit industry.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	32 300	59 300	62 500
Average	23 000	45 100	49 400
Lowest 20%	12 600	29 800	34 500

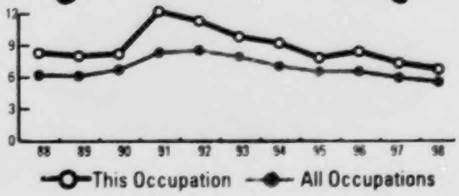
Overall Average for All Ages (15+)

This Occupation	All Occupations
37 200	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate



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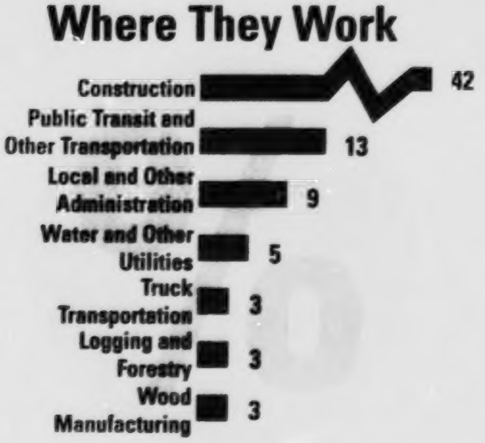
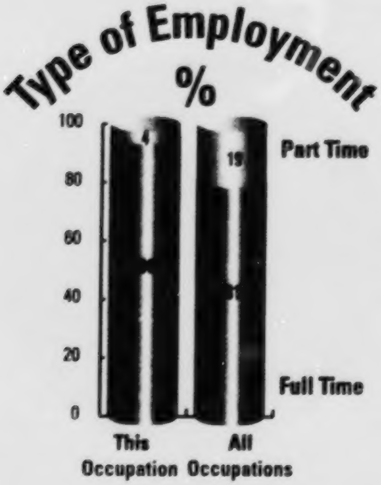
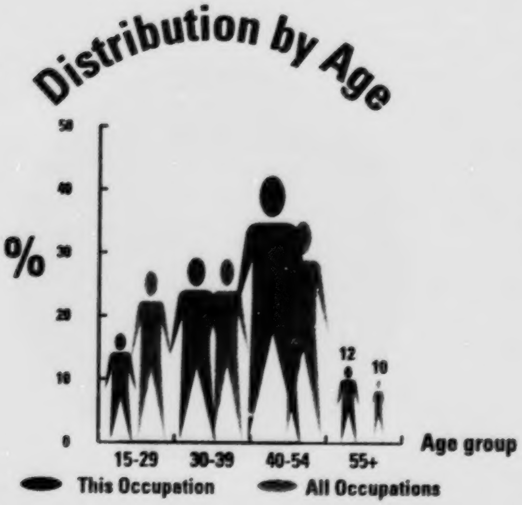
Heavy Equipment Operators


Where They Work


Type of Employment


Distribution by Age

At Work

People in this group work for construction companies; heavy equipment contractors; pipeline, logging, cargo-handling and other companies; governments; and private contractors.

- Heavy equipment operators operate backhoes, bulldozers, loaders, graders, side-booms, dredging and heavy paving equipment, power shovels, pile drivers and other heavy equipment.
- Heavy equipment operators excavate, load, grade and clear land in the construction and maintenance of roads, bridges, airports, oil and gas pipelines, tunnels, buildings and other structures; in surface mining and quarrying activities; and in material handling work.
- Public works maintenance equipment operators operate garbage trucks, street cleaning equipment, snowploughs, sewer maintenance equipment, sanding and oiling trucks and other maintenance equipment.

This occupational group also includes backhoe, bulldozer and grader operators; garbage truck drivers; sand spreader operators; street flusher operators; and salt truck operators.

Education, Training & Experience

- People in this group usually require secondary school education. Many recent entrants have a high school diploma.
- Heavy equipment operators must complete a one- to two-year apprenticeship or have some high school, college or industry courses in heavy equipment operating combined with on-the-job training.
- Heavy equipment operators require trade certification in Quebec. It is available, but voluntary, in Newfoundland and the Northwest Territories. These operators may require company certification at their place of employment.
- Public works maintenance operators usually need experience as public works labourers. They usually get on-the-job training and may require a driver's licence appropriate to the equipment they are driving.
- With experience, they may progress to supervisory positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: T314, C350, C641, T315, T350

NOC 742

In These Occupations...

- 80,000 people were employed in 1998, an increase of 6.2% from 1988. After declining 5.6% over the 1988 to 1993 period, employment increased 12.6% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 79% are heavy equipment operators and 21% are public works maintenance equipment operators.
- 4% work part-time, well below the average of 19% for all occupations.
- 8% are self-employed, compared to an average of 17% for all occupations.
- 2% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 13.1% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for occupations with similar education/training requirements and for occupations in the trades, transport and equipment operation sectors.
- the average earnings are among the highest for occupations with similar education/training requirements but are comparable to those for other occupations in the trades, transport and equipment operation sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities are average and earnings are above the average level for comparable occupations.
- Over the next five years, the outlook is expected to improve to "Good". The number of job openings for heavy equipment operators is expected to increase more rapidly than the number of qualified job seekers, due to strong employment growth and a significant retirement rate.
- As governments' fiscal situation improves, they may invest in new infrastructure and in deferred maintenance of existing infrastructure, thereby increasing demand for these occupations.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the construction industry.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	37 500	44 000	45 200
Average	27 700	34 600	35 500
Lowest 20%	18 300	24 500	25 300

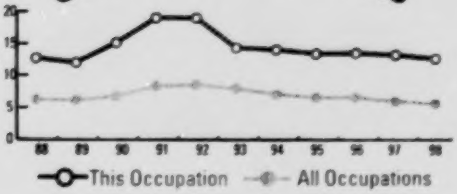
Overall Average for All Ages (15+)

This Occupation	All Occupations
38 500	37 400

Work Prospects

CURRENT	2004
GOOD	[✓ GOOD]
[✓ FAIR]	FAIR
LIMITED	LIMITED

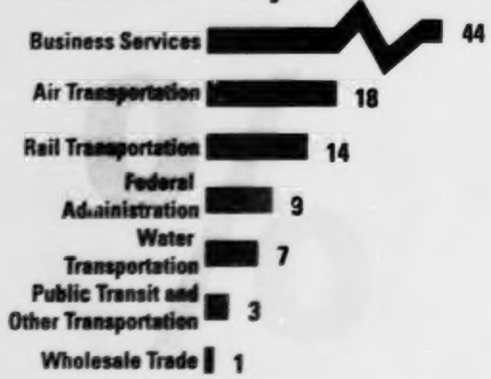
Unemployment Rate



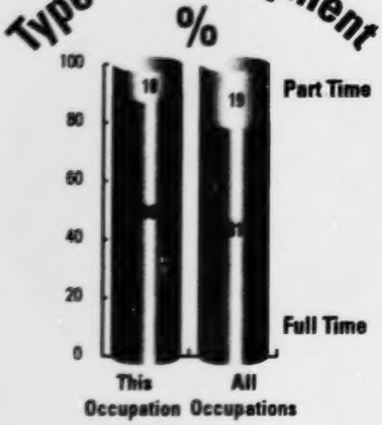
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Other Transport Equipment Operators and Related Workers

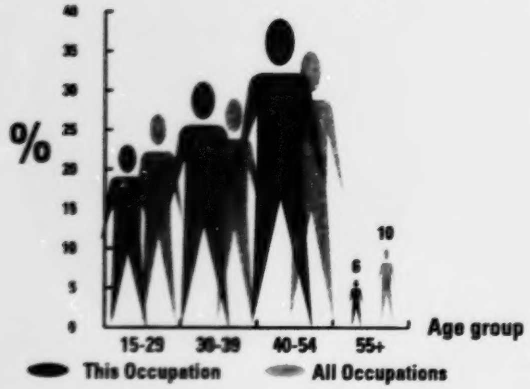
Where They Work



Type of Employment



Distribution by Age



At Work

These people work in railway and marine transport companies; the federal government, including the Canadian Forces; cable ferry companies; marine sightseeing companies; water taxi services; canal, port and harbour authorities; logging, airline and air services companies; and ferry terminals.

- Railway yard workers regulate traffic, and couple, uncouple and switch train cars.
- Railway track maintenance workers lay, maintain and repair tracks.
- Water transport deck crew stand watch and operate and maintain deck equipment.
- Engine room crew assist in the operation, maintenance and repair of engines and equipment on ships and vessels.
- Lock operators open and close locks along canal systems.
- Cable ferry operators run cable ferries.
- Boat operators run small boats to transport passengers and freight.
- Air transport ramp attendants operate ramp-servicing vehicles, handle cargo and baggage, marshal and tow aircraft, and clean aircraft interiors and exteriors.

Education, Training & Experience

- People in this group usually require some high school or a high school diploma. Many recent entrants have a high school diploma.
- They usually receive on-the-job training.
- Some require experience in their area of work.
- Railway yard workers need a specific level of the Certificate of the Canadian Rail Operating Rules.
- Boat operators require a Transport Canada certificate.
- Air transport ramp attendants usually have a driver's licence and a good driving record.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: C315, T390, T332, T312, C331, T313, T314

NOC 743

In These Occupations...

- 21,000 people were employed in 1998, a decrease of 18.1% from 1988. Most of the decline occurred from 1988 to 1993, when employment decreased 16.1%. Employment declined 2.5% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- These persons work in a wide variety of transport equipment operating occupations.
- 10% work part-time, compared to an average of 19% for all occupations. The proportion of part-time workers in these occupations has increased significantly over the past ten years.
- 2% are self-employed, well below the average of 17% for all occupations.
- 8% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 7.3% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the highest for occupations with similar education/training requirements but are comparable to other occupations in the trades, transport and equipment operation sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited" as a result of large long-term employment losses.
- Over the next five years, this outlook is not expected to change, as employment losses are expected to continue.
- Skill requirements in many of these occupations are affected by increasingly automated operating and dispatching systems.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	36 900	48 000	51 400
Average	29 500	39 600	43 400
Lowest 20%	20 700	32 200	34 500

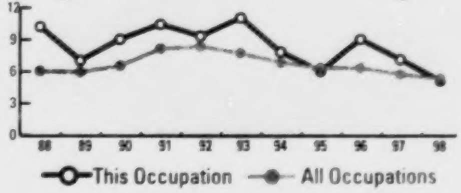
Overall Average for All Ages (15+)

This Occupation	All Occupations
40 100	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

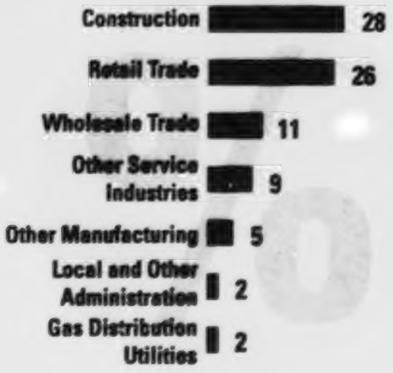
Unemployment Rate

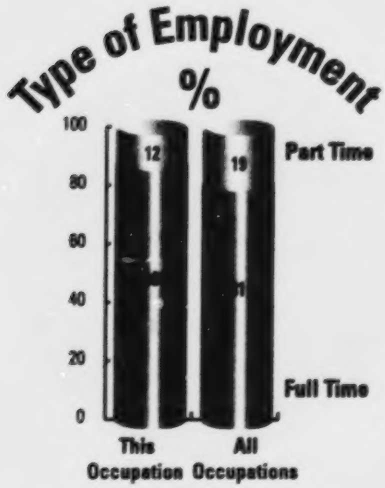


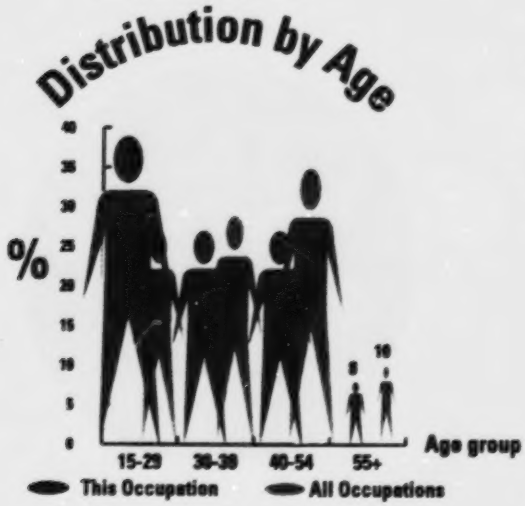
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Other Installers, Repairers and Servicers

Where They Work







At Work

People in this group work in gas distribution companies; water filtration and distribution and waste treatment plants; automobile and truck service and repair shops; service departments of industrial organizations and construction, mining and logging companies; pest control companies; product specialty repair shops; and installation and service organizations. They may also be self-employed.

- Residential and commercial installers and servicers install and service products such as water heaters, septic systems and prefabricated windows, doors and fences.
- Waterworks maintenance workers maintain and repair waterworks equipment and facilities.
- Gas maintenance workers perform routine maintenance and minor repairs to exterior and underground gas mains and distribution lines.
- Automotive mechanical installers and servicers install parts such as mufflers, exhaust pipes and shock absorbers, and perform oil changes and other routine maintenance on motor vehicles and heavy equipment.
- Pest controllers and fumigators apply chemical and other treatments to buildings and outside areas to remove and destroy insects and other pests.
- Other repairers and servicers repair and service a wide variety of products such as cameras, musical instruments and coin and vending machines.

Education, Training & Experience

- People in this group usually need some high school education. Many recent entrants have a high school diploma.
- They usually receive on-the-job training.
- Some require college or other courses or experience in their company.
- Residential and commercial installers and repairers usually need experience and may require a driver's licence.
- Pest controllers and fumigators require a pesticide applicator licence.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: T332, T313, T315, T314

NOC 744

In These Occupations...

- 45,000 people were employed in 1998, a decrease of 1.2% from 1988. However, after declining 6.8% over the 1988 to 1993 period, employment increased 6.1% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 42% are residential and commercial installers and servicers and 20% are automotive mechanical installers.
- 12% work part-time, compared to an average of 19% for all occupations.
- 18% are self-employed, compared to an average of 17% for all occupations.
- 4% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 10.3% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for occupations with similar education/training requirements.
- the average earnings are comparable to other occupations with similar education/training requirements and to other occupations in the trades, transport and equipment operation sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Conditions are likely to vary widely among the many occupations in this group.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the construction and retail trade industries.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	39 200	48 300	55 400
Average	29 100	36 300	39 600
Lowest 20%	18 700	24 100	23 200

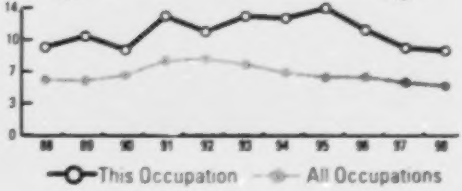
Overall Average for All Ages (15+)

This Occupation	All Occupations
33 300	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

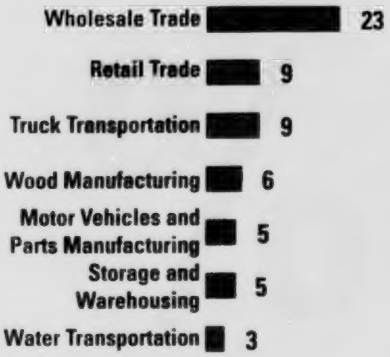
Unemployment Rate

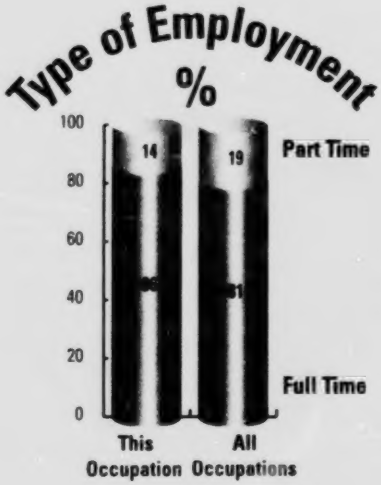


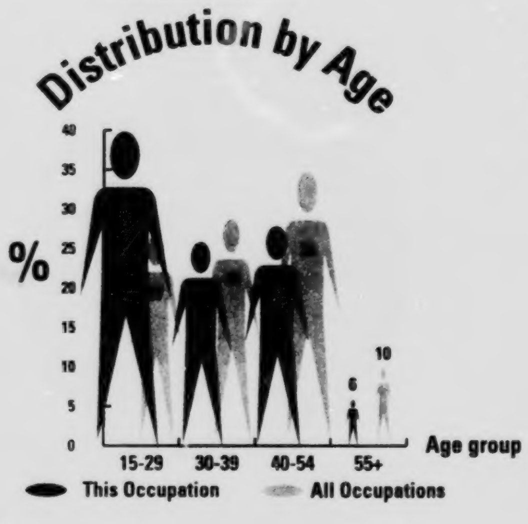
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Longshore Workers and Material Handlers and Related Occupations

Where They Work







At Work

People in this group work in marine cargo handling companies; shipping agencies and shipping lines; transportation, storage and moving companies; and a wide variety of manufacturing and processing companies and retail and wholesale warehouses.

- Longshore workers operate industrial trucks, tractors and other mobile equipment to transfer containers and other cargo within range of cranes and hoists on dock areas. They operate winches and other hoisting devices to load and unload cargo on and off ships, and operate mechanical towers to load vessels with materials such as coal and ore. They also operate equipment to transfer bulk items such as grain to vessel holds and liquid materials to vessel storage tanks.
- Material handlers (manual) load, unload and move products by hand or on dollies or other basic material handling equipment.
- Material handlers (equipment operators) operate winches and other loading devices, industrial trucks, tractors and loaders to transport and retrieve materials. They also operate various types of equipment and conveyors to handle liquid, bulk and other materials.

This group also includes dockworkers, stevedores, ship loader operators, tank loaders, bin fillers, coal handlers, furniture movers, lumber pilers, conveyer console operators, forklift truck operators, railway car and truck loaders, stockpilers and storage workers.

Education, Training & Experience

- People in this group usually require secondary school education. Many recent entrants have a high school diploma.
- Longshore workers receive on-the-job training.
- Material handlers (manual) must have the physical strength to work with heavy materials.

Check out the 'big picture' in "World of Work: Overviews and Trends"

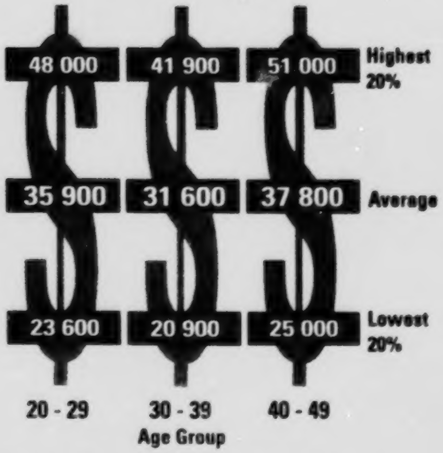
In These Occupations...

- 165,000 people were employed in 1998, an increase of 17.6% from 1988. After declining 8.0% over the 1988 to 1993 period, employment increased 27.8% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 94% are material handlers.
- 14% work part-time, compared to an average of 19% for all occupations.
- 1% are self-employed, well below the average of 17% for all occupations.
- 12% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 11.0% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for occupations with similar education/training requirements.
- the average earnings are comparable to those for other occupations with similar education/training requirements but are among the lowest for occupations in the trades, transport and equipment operation sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited", since employment opportunities and earnings are both well below average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Automation of transfer systems will continue to affect demand for labour negatively in these occupations.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the wholesale trade, truck transportation, retail trade and business services industries.

Earnings



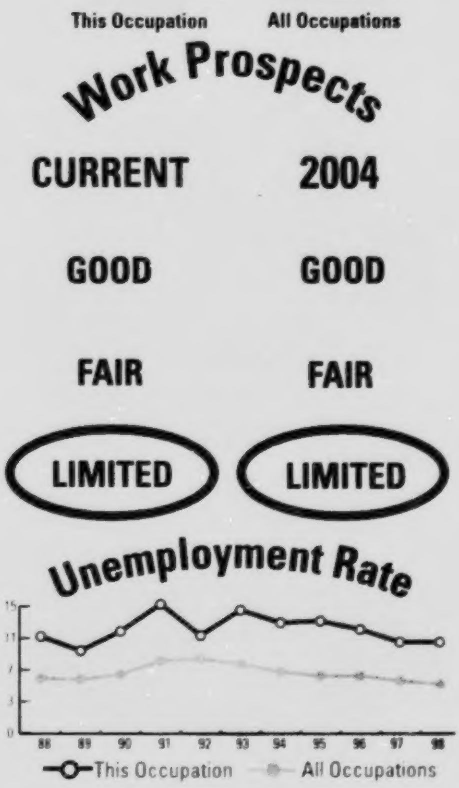
Overall Average for All Ages (15+)

30 500	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

Unemployment Rate



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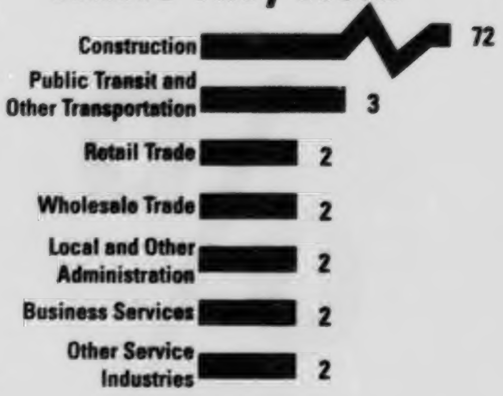
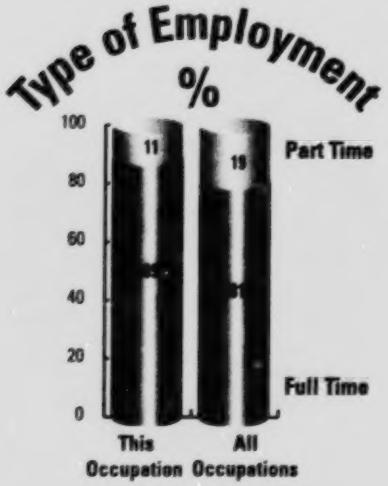
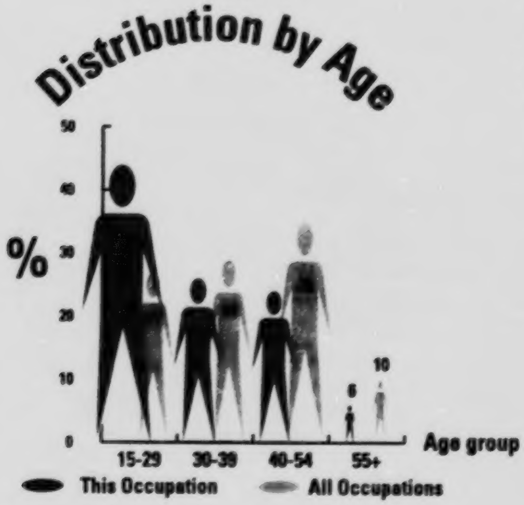
Trades Helpers and Labourers

Where They Work







At Work

People in this group work in construction companies, for trade and labour contractors, and for a wide variety of manufacturing, utility and service companies. They assist skilled tradespersons and perform labouring activities. Their duties may require them to:

- move, load and unload materials;
- erect and dismantle structures;
- mix, pour, spread and rake materials;
- install, operate, maintain and repair equipment and machinery;
- oil and grease equipment;
- assist in drilling and blasting rock;
- tend and feed machines such as mixers and compressors;
- direct traffic near construction sites;
- mix fertilizers, herbicides and pesticides; and
- assist in land surveying by holding and moving stakes and rods.

This occupational group also includes trades helpers and labourers who work in activities involving the installation, maintenance and repair of industrial machinery, refrigeration, heating and air conditioning equipment, transportation and heavy equipment, and telecommunication and power cables.

Education, Training & Experience

- People in this group may require some high school education. Many recent entrants have a high school diploma.
- Construction labourers may need general construction labouring experience.
- Some receive on-the-job training.
- Construction labourers in large-diameter oil and gas pipeline construction usually require one season's experience in this type of oil and gas pipeline construction.

Check out the 'big picture' in "World of Work: Overviews and Trends"

NOC 761

In These Occupations...

- 102,000 people were employed in 1998, a decrease of 9.4% from 1988. This reflects a decrease of 5.2% from 1988 to 1993 and 4.4% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 90% are construction trades helpers and labourers.
- 11% work part-time, compared to an average of 19% for all occupations.
- 5% are self-employed, well below the average of 17% for all occupations.
- 5% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 24.1% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for occupations with similar education/training requirements and for occupations in the trades, transport and equipment operation sectors.
- the average earnings are comparable to other occupations with similar education/training requirements but are among the lowest for occupations in the trades, transport and equipment operation sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited", since employment opportunities are below average and earnings are well below average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- New technology, such as improved concrete-pouring machinery, continues to have a negative impact on demand for labour in these occupations. Use of more sophisticated equipment will increase the educational and skill requirements of these jobs.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	40 400	50 400	56 700
Average	29 800	37 400	41 800
Lowest 20%	17 700	22 300	25 200

Age Group

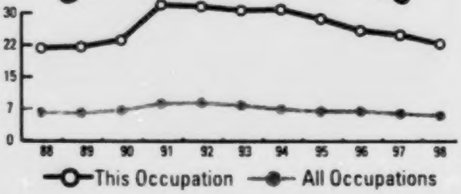
Overall Average for All Ages (15+)

This Occupation	All Occupations
29 100	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

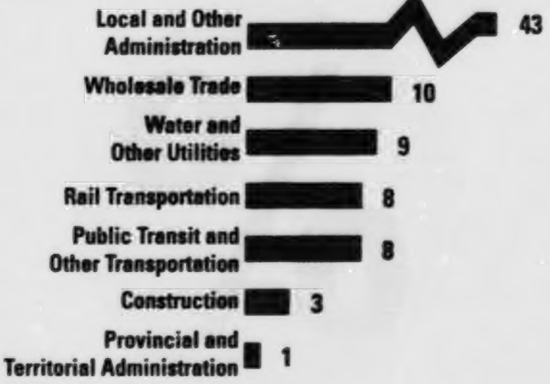
Unemployment Rate

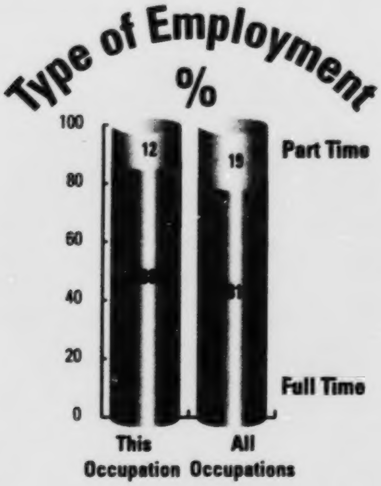


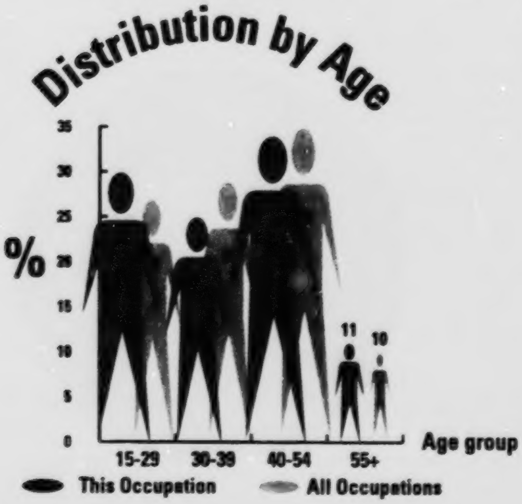
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Public Works and Other Labourers

Where They Work







At Work

People in this group work in municipal, provincial, territorial and federal government public works departments; for private contractors under contract to governments; and for railway and motor transport companies.

- Public works and maintenance labourers clean debris and snow from sidewalks, streets, roads and other areas; spread sand and salt on sidewalks; shovel materials; dig ditches and trenches; and spread concrete and asphalt on road surfaces using rakes and other hand tools. They operate jackhammers, drills, power mowers and cutters and may operate mobile sidewalk cleaning machines.
- Railway labourers transport tools and equipment on push or hand cars and assist railway track maintenance workers to lay, maintain and repair railway tracks.
- Motor transport labourers assist truck and delivery drivers to load and unload vehicles and perform labouring duties in warehouses.

This occupational group also includes garbage collectors; parking meter collectors; road and sewer maintenance workers; railway car checkers; signal gang helpers; and furniture mover, moving van and truck driver helpers.

Education, Training & Experience

- People in this group have different educational requirements depending on their area of work. Many recent entrants have a high school diploma.
- Public works and maintenance labourers receive on-the-job training.
- Railway and motor transport labourers usually require some high school education.
- With experience, they may progress to supervisory positions or to those requiring greater skills.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: C331, T350, T333

NOC 762

In These Occupations...

- 20,000 people were employed in 1998, an increase of 17.6% from 1988. After employment gains of 11.8% from 1988 to 1993, employment growth slowed to 5.1% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 87% are public works and maintenance labourers.
- 12% work part-time, compared to an average of 19% for all occupations.
- 2% are self-employed, well below the average of 17% for all occupations.
- 10% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 13.0% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for occupations in the trades, transport and equipment operation sectors.
- the average earnings are comparable to those for other occupations with similar education/training requirements but are among the lowest for occupations in the trades, transport and equipment operation sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited", since employment opportunities are below average and earnings are well below average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Continued restructuring in the public sector and the accompanying contracting-out are likely to have a negative impact on labour demand in these occupations.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the local administration, public transit and water and other utilities industries.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	35 200	38 400	44 600
Average	25 800	30 300	35 300
Lowest 20%	16 000	22 300	25 600

Age Group

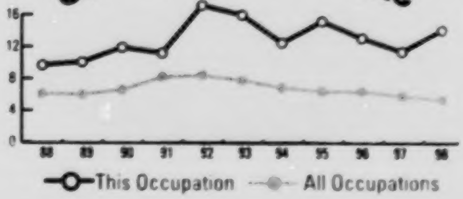
Overall Average for All Ages (15+)

This Occupation	All Occupations
25 800	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

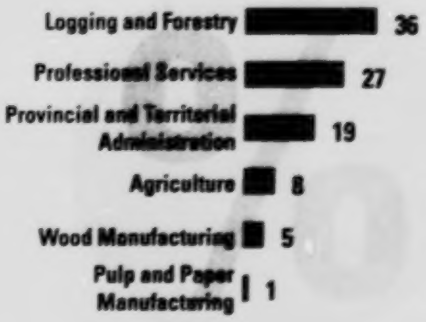
Unemployment Rate



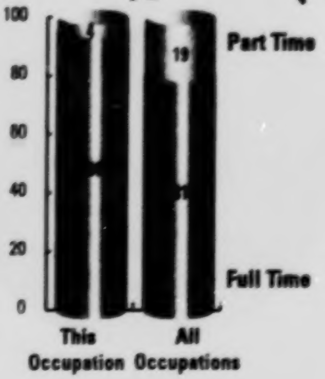
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Supervisors, Logging and Forestry

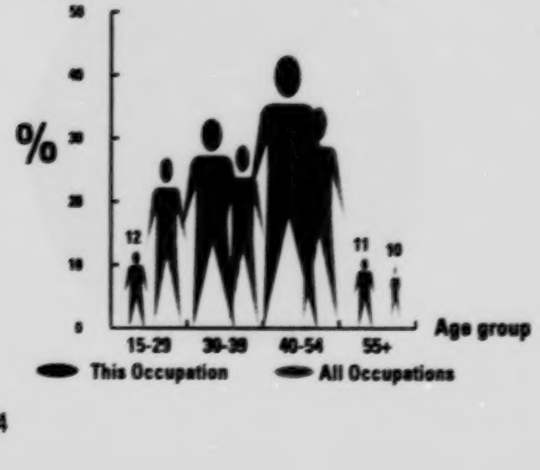
Where They Work



Type of Employment



Distribution by Age



At Work

These supervisors are employed by logging companies, contractors and government agencies. Their duties may require them to:

- supervise and coordinate the activities of logging and forestry workers in woodland operations and the activities of silviculture workers engaged in scarification, planting and vegetation control activities;
- schedule work crews, equipment and transportation for several work locations;
- resolve problems and recommend measures to improve work methods;
- instruct workers in safety and recognize unsafe work conditions;
- ensure that operations meet government regulations;
- communicate with forestry professional, technical and management personnel regarding forest harvesting and forest management plans;
- prepare production and other reports; and
- hire and train new workers.

This occupation also includes hook tenders, logging contractors, woods foremen and forewomen, and supervisors of forest operations and silviculture.

Education, Training & Experience

- These supervisors usually need a high school diploma. Many recent entrants have a community college diploma or an undergraduate university degree.
- They may require a one- to three-year college program for forestry technologists or technicians.
- They receive formal company training and on-the-job training.
- They usually need several years' experience as loggers, silviculture workers or logging machinery operators.
- They may require a chemical application licence and an industrial first-aid certificate.

Check out the 'big picture' in "World of Work: Overviews and Trends"

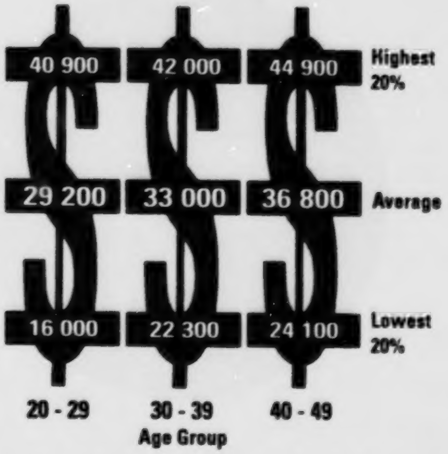
In These Occupations...

- 8,000 people were employed in 1998, an increase of 6.2% from 1988. However, after rising 8.0% over the 1988 to 1993 period, employment decreased 1.6% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 4% work part-time, well below the average of 19% for all occupations.
- 59% are self-employed, well above the average of 17% for all occupations.
- 3% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 6.8% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations but are among the highest for occupations in the primary industry sector.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities and earnings are both above the average levels for comparable occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.

Earnings



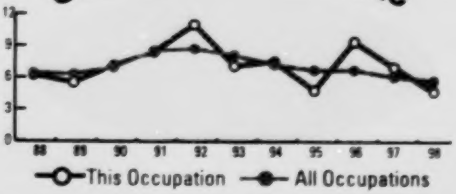
Overall Average for All Ages (15+)

38 200	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	**GOOD**
FAIR	FAIR
LIMITED	LIMITED

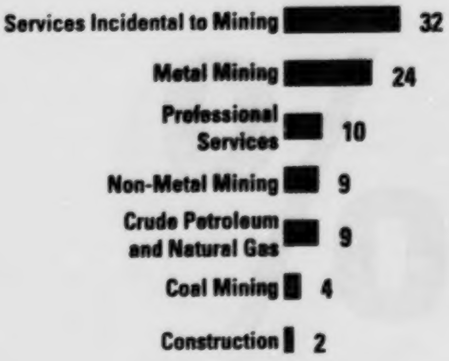
Unemployment Rate



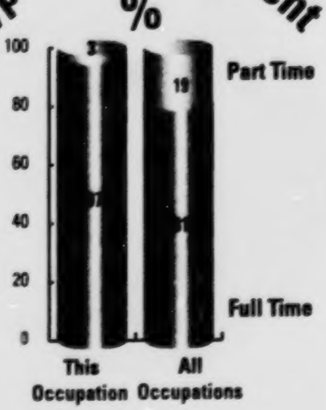
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Supervisors, Mining, Oil and Gas

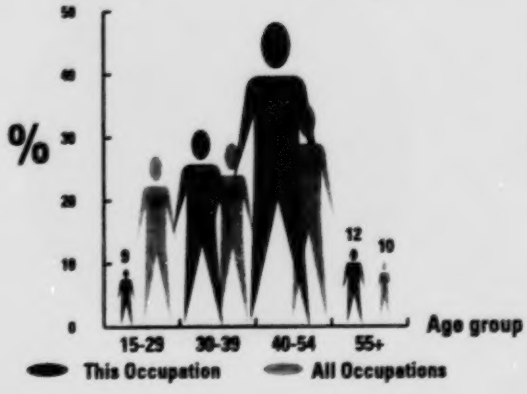
Where They Work



Type of Employment



Distribution by Age



At Work

These supervisors work for coal, metal and non-metal mineral mining and quarrying companies, and for drilling and well service contractors and petroleum producing companies. Their duties may require them to:

- supervise the activities of workers in underground and surface mines and quarries, or workers who drill for oil and gas, operate service rigs or provide oil and gas services;
- establish work schedules and coordinate work activities with other departments;
- oversee safety of operations;
- resolve work problems and recommend measures to improve productivity;
- recommend hirings and promotions;
- train workers in job duties, safety procedures and company policies;
- requisition materials and supplies; and
- prepare production and other reports.

This occupational group also includes mine captains; shift, track and yard bosses; rig managers; multiservice operators; and tool pushers.

Education, Training & Experience

- These supervisors must have a high school diploma. Many recent entrants have some post-secondary qualification.
- Mining and quarrying supervisors may need a college or university program in mining technology or engineering. They usually require several years' experience and may require provincial certification.
- Oil and gas drilling and service supervisors require extensive experience - eight years or more - in the occupations they are supervising. They also need first-aid, hydrogen-sulphide awareness, blowout prevention and other safety certificates. They may also require a college diploma in petroleum engineering technology.
- In addition, drilling supervisors and rig managers need college or industry courses for drillers and supervisors.
- Well service supervisors require college or industry courses and several years' experience.

Check out the 'big picture' in "World of Work: Overviews and Trends"

In These Occupations...

- 12,000 people were employed in 1998, an increase of 5.8% since 1988. However, after rising 11.0% over the 1988 to 1993 period, employment decreased 4.7% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 56% are supervisors in mining and quarrying and 44% are supervisors in oil and gas drilling and services.
- 3% work part-time, well below the average of 19% for all occupations.
- 30% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 5% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 3.7% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations in the primary industry sector.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations and for occupations in the primary industry sector.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities are above the average level for comparable occupations and earnings are well above average.
- Over the next five years, this outlook is not expected to change. The number of job openings for mining, oil and gas supervisors is expected to increase more rapidly than the number of qualified job seekers, mostly due to a high retirement rate.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the mining services and non-metal mining industries.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	45 200	48 900	51 300
Average	33 400	38 600	41 700
Lowest 20%	21 100	26 900	32 000

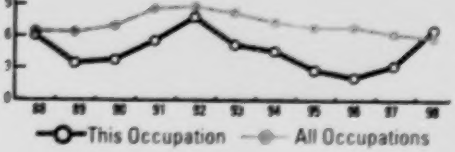
Overall Average for All Ages (15+)

This Occupation	All Occupations
46 900	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

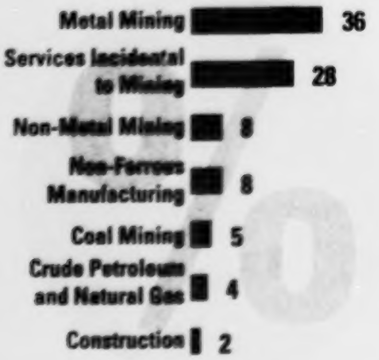
Unemployment Rate

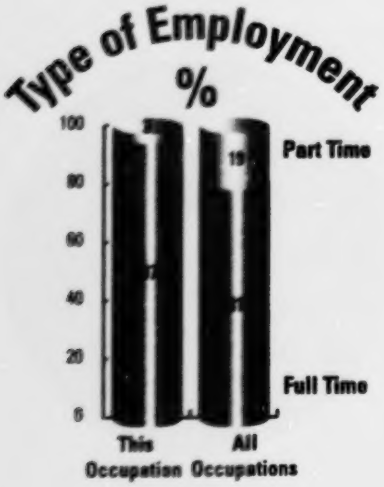


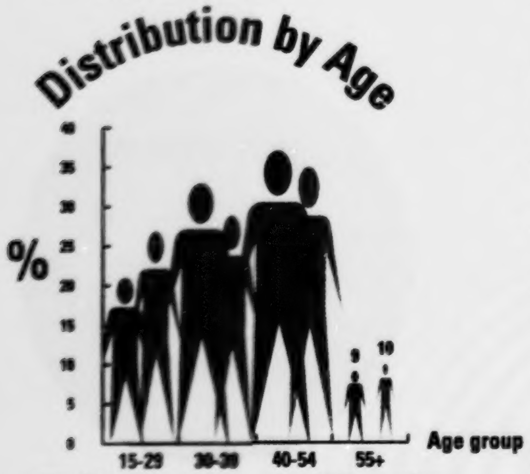
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Underground Miners, Oil and Gas Drillers and Related Workers

Where They Work







At Work

People in this group work in coal, metal and non-metallic mineral underground mines; for specialized mine, drilling and well service contractors; and for petroleum producing, well logging and testing companies.

- Underground production and development miners operate drilling and mining machines, load and detonate explosives, and perform other activities in underground mining.
- Oil and gas drillers and well servicers direct drill crews in setting up rigs during drilling activities and completing or servicing wells. They operate drill or service rig machinery controls.
- Oil and gas well loggers, testers and related workers operate specialized mechanical and electronic equipment, tools and instruments to provide services for well drilling, completion and servicing.

This occupational group also includes blasters, jumbo drill operators and mining machine operators, electric line operators, service rig operators and well testing operators.

Education, Training & Experience

- People in this group usually have a high school diploma. In some cases, appropriate experience may replace this educational requirement. Many recent entrants have a high school diploma.
- They usually require industry or college courses, supervised on-the-job training and experience in subordinate positions such as mine labourer and rig crew member.
- Underground production and development miners often need company licensing or certification, and may require blasting licences.
- Those working in the oil and gas occupations need first-aid, hydrogen-sulphide awareness, blowout prevention and other safety certificates.
- Offshore drillers require several years' experience in similar land positions.
- Certification is available in underground hard rock mining in Ontario.
- Company licensing or certification is usually required for these occupations.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: C640, T315, C660, T314

NOC 823

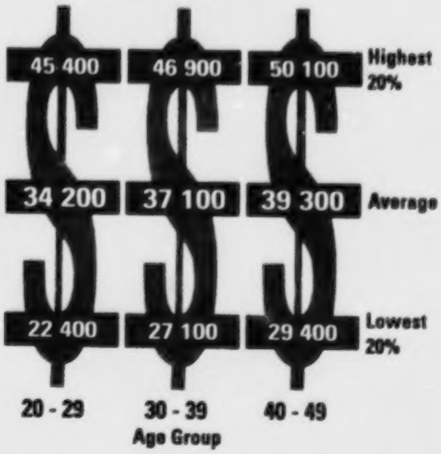
In These Occupations...

- 21,000 people were employed in 1998, a decrease of 1.6% from 1988. However, after declining 26.9% over the 1988 to 1993 period, employment increased 34.5% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 77% are underground miners; and 23% are oil and gas well drillers, servicers and testers.
- 3% work part-time, well below the average of 19% for all occupations.
- 14% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 2% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 7.5% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for technical, paraprofessional and skilled occupations.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations and for occupations in the primary industry sector.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities are average, although earnings are well above average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- In oil drilling, the greatest demand is expected to be for specialized directional and high-tech drillers.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the non-metal mining and mining services industries.

Earnings



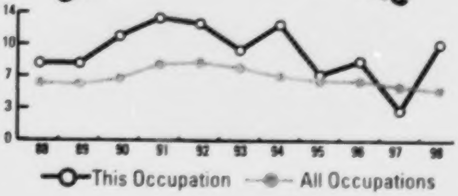
Overall Average for All Ages (15+)

47 600	37 400
This Occupation	All Occupations

Work Prospects

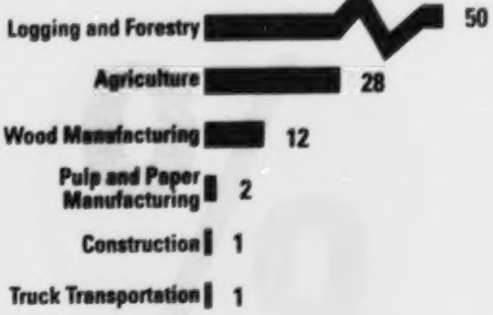
CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate

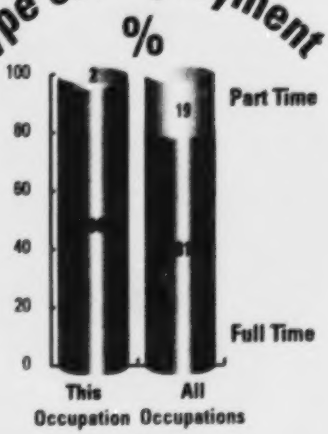


Logging Machinery Operators

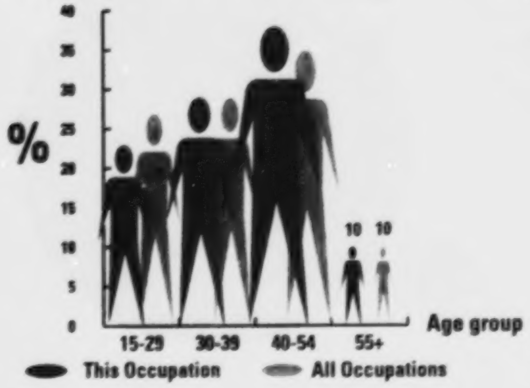
Where They Work



Type of Employment



Distribution by Age



At Work

People in this occupation work for logging companies and contractors and in a variety of other industries such as wood, and pulp and paper manufacturing, construction, and retail trade.

- Cable yarding system operators use machines to transport trees from logging sites to landing sites and log-loading locations in mountainous terrain.
- Mechanical harvester and forwarder operators assess logging sites and drive heavy equipment to perform a combination of felling, slashing, bucking (sawing trees into logs), bunching and forwarding operations at logging sites.
- Mechanical tree processor and loader operators use machines to perform a combination of slashing, bucking, bunching, chipping, sorting and loading operations at landing sites.

Education, Training & Experience

- People in this occupation usually require secondary school education.
- Employers provide them with on-the-job training, which varies from three to sixteen months, depending on the type of woodland operation and the machinery operated.
- Logging machine operators may require heavy equipment operations certification, air brake certification, Workplace Hazardous Materials Information System (WHMIS) certification and company certification for mobile logging machinery operation.
- Mechanical harvester and forwarder operators may require chain saw and skidder operator experience.
- Feller buncher and cable yard operators usually require from three to five years' logging experience.
- Mechanical tree processor and loader operators usually require one to three years' logging experience.
- Company certification or training for heavy equipment may be required.

Check out the 'big picture' in "World of Work: Overviews and Trends"

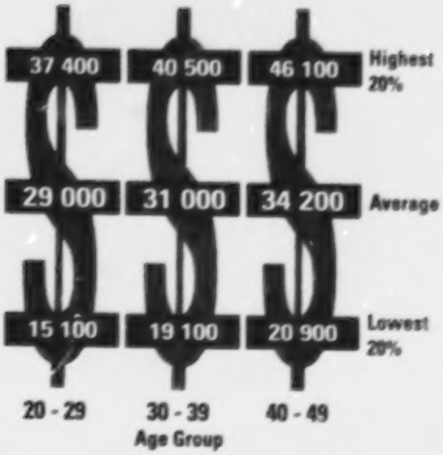
In These Occupations...

- 13,000 people were employed in 1998, an increase of 6.4% from 1988. After declining 2.2% over the 1988 to 1993 period, employment increased 8.8% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 2% work part-time, well below the average of 19% for all occupations.
- 16% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 1% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 19.4% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for technical, paraprofessional and skilled occupations and for occupations in the primary industry sector.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations and are among the highest for occupations in the primary industry sector.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited", since employment opportunities are well below average, although earnings are at the average level for all occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.

Earnings



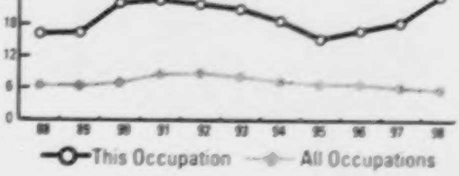
Overall Average for All Ages (15+)

37 400	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

Unemployment Rate



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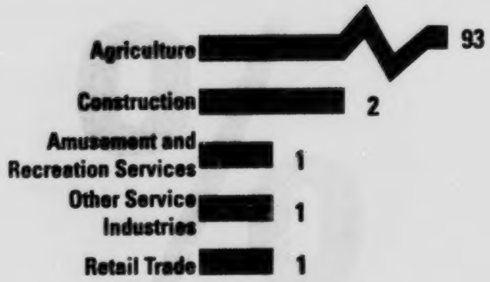
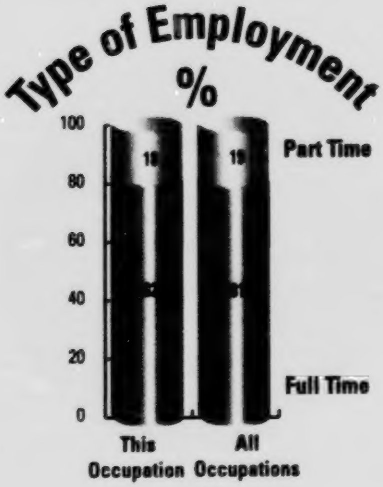
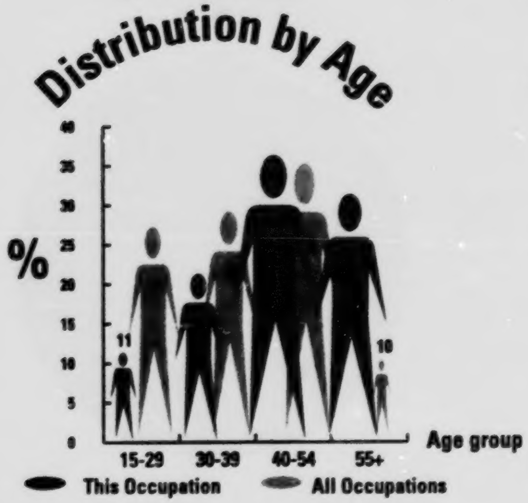
Contractors, Operators and Supervisors in Agriculture, Horticulture and Aquaculture

Where They Work







At Work

People in this group work for farmers, agricultural services, nurseries and greenhouses, landscaping companies, cemeteries, lawn care and tree service companies, landscaping departments of governments and other organizations, private fish hatcheries and commercial aquatic farms. They may also be self-employed.

- Farmers and farm managers manage the operations of farms, ranches and orchards. They grow crops and raise and breed farm animals and market farm products.
- Agricultural and related service contractors and managers direct and coordinate services such as artificial insemination, livestock shearing, ploughing, cultivating and harvesting.
- Specialized livestock workers carry out feeding, health and breeding programs for livestock. They may also supervise farm workers and labourers.
- Nursery and greenhouse operators and managers direct and coordinate the activities of their staff who grow and market trees, shrubs, flowers and plants.
- Landscaping and grounds maintenance contractors and managers direct and coordinate the operations of landscaping, lawn care, tree and other services.
- Landscape and horticulture supervisors direct and coordinate the activities of associated workers.
- Aquaculture operators and managers direct and coordinate the operations of facilities that cultivate and harvest fish, shellfish and marine plants.

Education, Training & Experience

- People in this group may require some high school or a high school diploma. Many recent entrants have a high school diploma.
- They usually need a college diploma, and training and experience in agriculture, livestock husbandry, aquaculture, landscaping or horticulture.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: C610, T610, U613, U612, C840

NOC 825

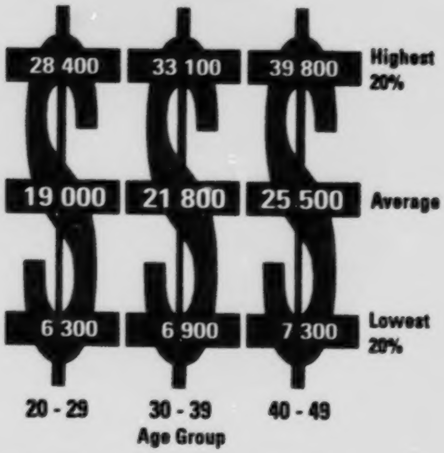
In These Occupations...

- 290,000 people were employed in 1998, an increase of 0.3% from 1988. After declining 1.0% over the 1988 to 1993 period, employment increased 1.3% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 87% are farmers and farm managers.
- 18% work part-time, compared to an average of 19% for all occupations.
- 91% are self-employed, well above the average of 17% for all occupations.
- 23% are women, well below the average of 45% for all occupations. The proportion of women in these occupations has increased significantly over the last ten years.
- the unemployment rate averaged 1.6% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for technical, paraprofessional and skilled occupations and for occupations in the primary industry sector.
- the average earnings are among the lowest for technical, paraprofessional and skilled occupations and are comparable to those for other occupations in the primary industry sector.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities are above average and earnings are below average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Increasing adoption of biotechnology and computerized systems in farming will require farm managers to learn skills in these areas.
- Most of the increase in employment requirements through 2004 for these occupations will occur in the agricultural industry.

Earnings



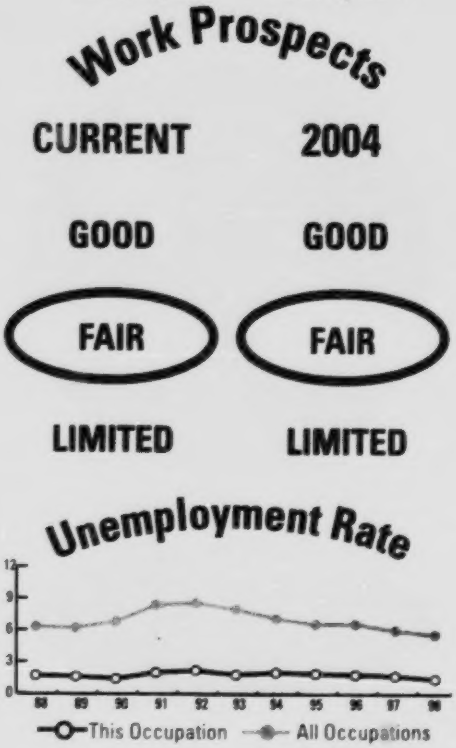
Overall Average for All Ages (15+)

This Occupation	All Occupations
27 500	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

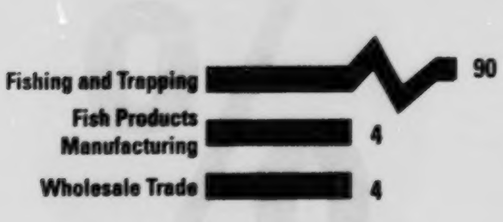
Unemployment Rate



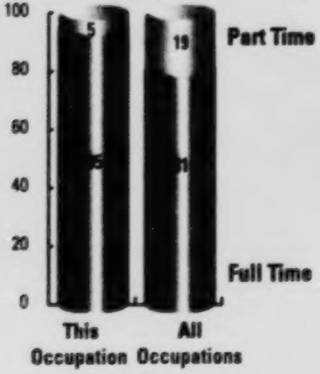
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Fishing Vessel Masters and Skippers and Fishermen/women

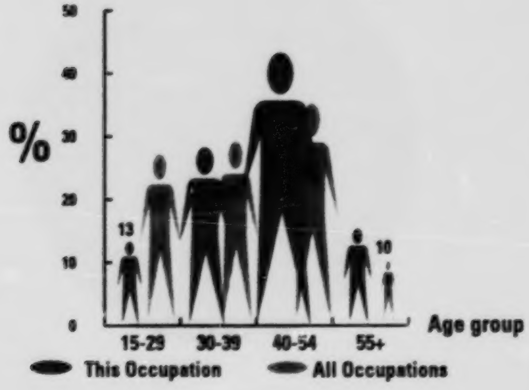
Where They Work



Type of Employment



Distribution by Age



At Work

People in this group work in commercial fishing vessel organizations. They may also be self-employed operators of fishing vessels.

- Fishing masters and officers command vessels greater than 100 gross tonnes to catch fish and other marine life. They determine fishing areas, pilot courses and compute navigational positions, steer vessels and operate navigational instruments to locate catch. They also direct operations and supervise activities of their crew.
- Fishing vessel skippers and fishermen/women operate vessels to catch fish and other marine life. They operate gear, direct operations and supervise crew members. They also estimate operation costs, plan budgets and establish marketing plans. They may transport fish to processing plants and fish buyers.

This occupational group also includes longliners and seiners.

Education, Training & Experience

- People in this group require commercial fishing licences.
- Fishing masters and officers usually require some high school education. They must have one to two years' experience as fishing vessel deckhands and a fishing master's certificate.
- Captains also require one year's service as officer in charge of the watch.
- Fishing vessel skippers and fishermen/women usually require several years' experience as fishing vessel crew members or helpers. They must have a licence for each fish species they catch.

Check out the 'big picture' in "World of Work: Overviews and Trends"

NOC 826

In These Occupations...

- 22,000 people were employed in 1998, a decrease of 7.9% from 1988. After rising 4.9% over the 1988 to 1993 period, employment decreased 12.3% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 91% are fishing vessel skippers and fishermen/women.
- 5% work part-time, well below the average of 19% for all occupations.
- 88% are self-employed, well above the average of 17% for all occupations.
- 7% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 8.5% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for technical, paraprofessional and skilled occupations.
- the average earnings are among the lowest for technical, paraprofessional and skilled occupations and are comparable to other occupations in the primary industry sector.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited" due to long-term employment losses.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- The future of these occupations depends on the future of fish stocks and on the industry's ability to diversify the species fished. A more conservation-oriented approach to fishing may require people in these occupations to learn new methods and skills.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	27 800	34 800	41 700
Average	20 800	25 100	27 700
Lowest 20%	9 900	11 700	8 700

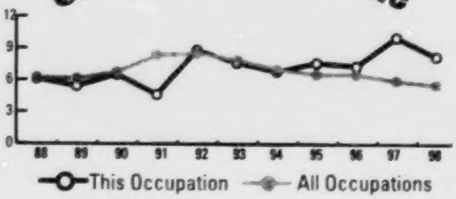
Overall Average for All Ages (15+)

This Occupation	All Occupations
30 200	37 400

Work Prospects

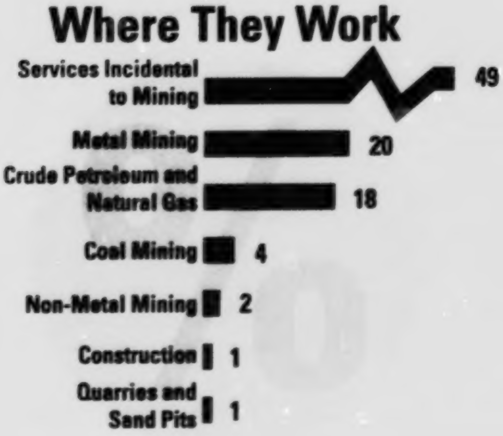
CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

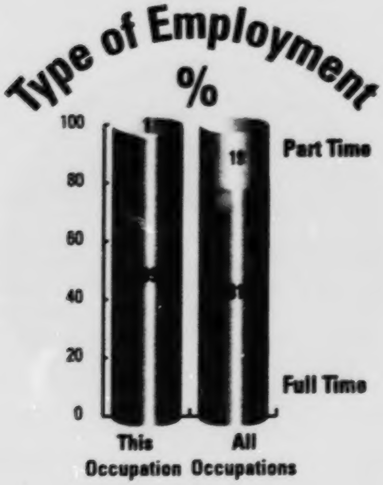
Unemployment Rate

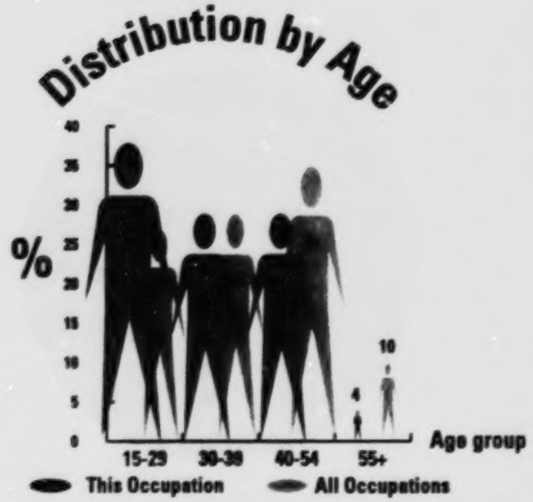


Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Mine Service Workers and Operators in Oil and Gas Drilling


Where They Work


Type of Employment


Distribution by Age

At Work

People in this group work for coal, metal and non-metallic mineral mines; drilling and well service contractors; and petroleum producing companies.

- Underground mine service and support workers perform a wide range of mining activities related to the operations of orepasses, chutes and conveyor systems; the construction and support of underground structures, passages and roadways; and the provision of materials and supplies. They operate bulldozers, graders, and diesel and electric track haulage equipment.
- Oil and gas drilling workers operate drilling machinery and service rig machinery equipment such as drilling mud systems and pumps, diesel motors, transmissions and other mechanical equipment, and perform other activities as intermediate members of drilling rig crews.
- Oil and gas well services operators drive trucks and operate specialized hydraulic pumping systems to place cement in wells and to treat wells with chemicals, sand mixtures and gases to stimulate production.

Education, Training & Experience

- People in this group require different educational and training backgrounds depending on their area of work. Many recent entrants have a high school diploma.
- Underground mine service and support workers usually have a high school diploma, formal and on-the-job training as helpers or in support occupations, and experience as mine labourers. They often require company licensing or certification. They may also obtain basic common core program certification.
- Oil and gas drilling workers and services operators may require a high school diploma and first-aid, hydrogen-sulphide awareness, blowout prevention or other safety certificates. They usually require industry experience as an assistant or labourer.
- Oil and gas well services operators require training with experienced operators.

Check out the 'big picture' in "World of Work: Overviews and Trends"

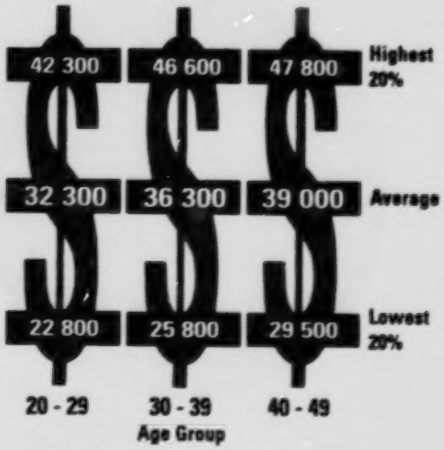
In These Occupations...

- 9,000 people were employed in 1998, an increase of 23.2% from 1988. After declining 8.2% over the 1988 to 1993 period, employment increased 34.2% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 66% are oil and gas well drilling workers and services operators and 34% are underground mine service and support workers.
- 1% work part-time, well below the average of 19% for all occupations.
- 3% are self-employed, well below the average of 17% for all occupations.
- 1% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 13.1% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for occupations with similar education/training requirements and for occupations in the primary industry sector.
- the average earnings are among the highest for occupations with similar education/training requirements and for occupations in the primary industry sector.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since earnings are well above average and employment opportunities are below average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Conditions in these occupations are always volatile, depending as they do on fluctuating commodities prices in international markets.

Earnings



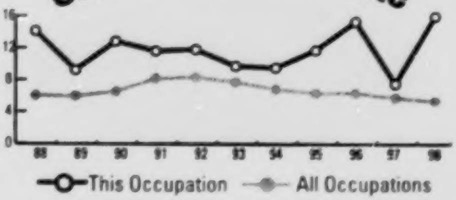
Overall Average for All Ages (15+)

This Occupation	All Occupations
44 900	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

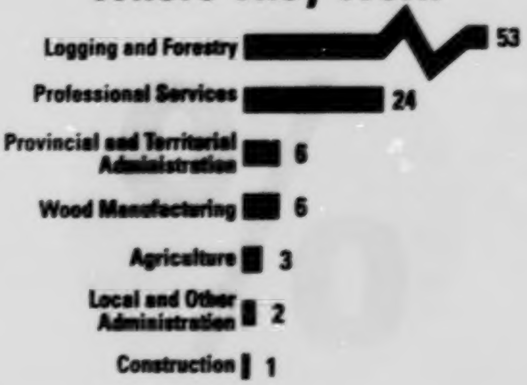
Unemployment Rate



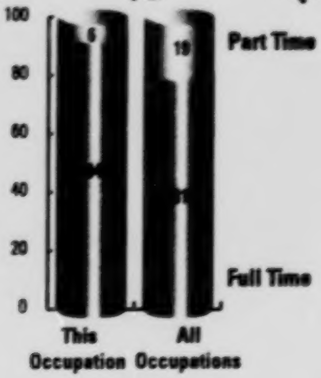
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Logging and Forestry Workers

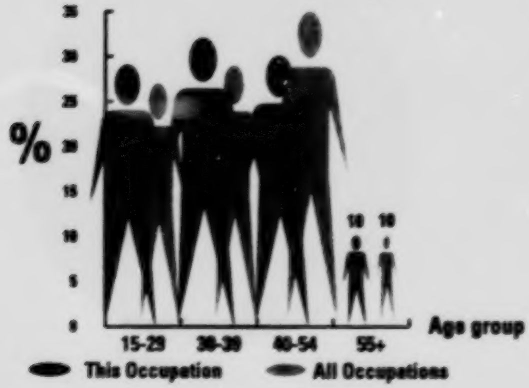
Where They Work



Type of Employment



Distribution by Age



At Work

People in this group work for logging companies and contractors in wood manufacturing, in government services and in a variety of other industries.

- Chain saw operators fell, delimb and buck trees (cut trees into logs).
- Skidder operators use cable and grapple skidders to move and yard felled trees from logging sites to landing areas for processing and transportation.
- Silviculture and forestry workers plant tree seedlings, thin and space trees in reforestation areas, control weeds and undergrowth, fight forest fires under direction, and operate chain saws, skidders, bulldozers and other equipment to carry out duties for the improvement and conservation of forest lands. They also perform other activities such as collecting seed cones, pruning trees and marking trees for later operations.

This occupational group also includes buckers, fallers, fellers, landingmen/women, forest-fire fighters and operators of spacing, thinning and clearing saws.

Education, Training & Experience

- People in this group may require a high school diploma. Many recent entrants have a high school diploma.
- They may need a college or other specialized forestry worker or silviculture program and Workplace Hazardous Materials Information System (WHMIS) certification.
- They may need experience as logging and forestry labourers or logging machine operators.
- Chain saw and skidder operators may require accreditation as forest workers. Employers usually provide them with formal training in chain saw operation and maintenance and several months' on-the-job training.
- Silviculture and forestry workers require a chemicals application licence and may need a silviculture worker's licence. Employers usually provide them with formal training in power saw operation and maintenance and several months' on-the-job training.

Check out the 'big picture' in "World of Work: Overviews and Trends"

In These Occupations...

- 25,000 people were employed in 1998, a decrease of 0.9% from 1988. However, after declining 10.3% over the 1988 to 1993 period, employment increased 10.5% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 70% are chain saw and skidder operators and 30% are silviculture and forestry workers.
- 6% work part-time, well below the average of 19% for all occupations.
- 25% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 5% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 24.0% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for occupations with similar education/training requirements and for occupations in the primary industry sector.
- the average earnings are among the highest for occupations with similar education/training requirements and for occupations in the primary industry sector.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since earnings are well above the average level for comparable occupations but employment opportunities are well below average.
- Over the next five years, the outlook is expected to weaken to "Limited", as the number of qualified job seekers is expected to exceed the number of job openings, due to continuing employment losses.
- Workers who specialize in silviculture and forestry management may have better employment opportunities.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	41 000	45 800	48 600
Average	28 900	31 300	34 900
Lowest 20%	15 400	14 300	14 000

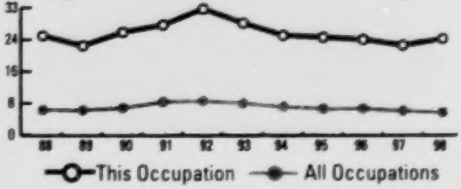
Overall Average for All Ages (15+)

This Occupation	All Occupations
37 100	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	FAIR
LIMITED	[✓ LIMITED]

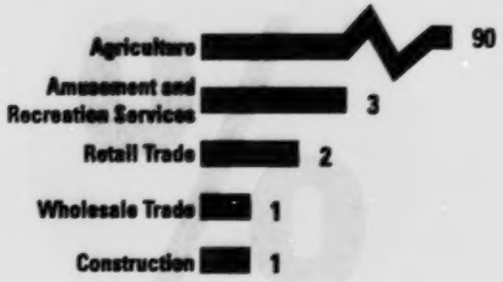
Unemployment Rate

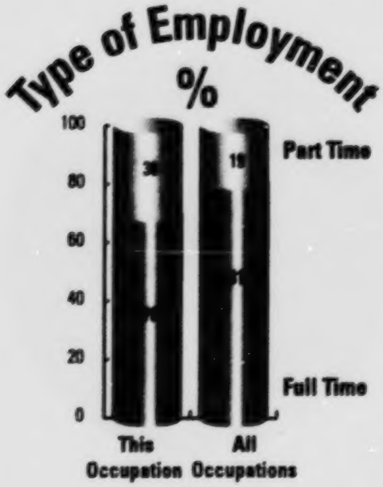


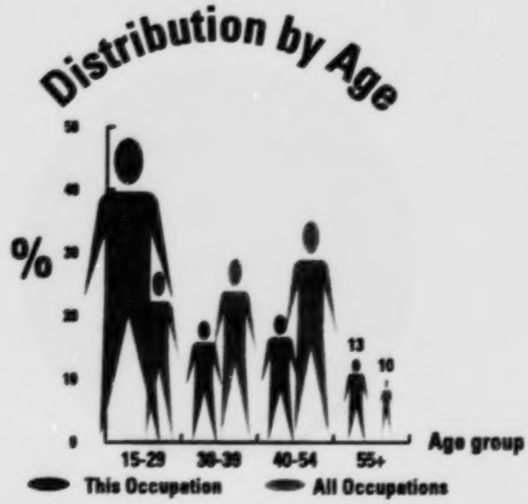
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Agriculture and Horticulture Workers

Where They Work







At Work

People in this group work on crop, livestock, fruit, vegetable and specialty farms, and in indoor and outdoor nurseries and greenhouses.

- General farm workers plant, fertilize, cultivate, spray, irrigate and harvest crops; feed and attend to livestock and poultry; operate and maintain farm machinery and equipment; and prepare produce for market. They may specialize in a particular type of crop or livestock.
- Nursery and greenhouse workers plant, cultivate and harvest trees, shrubs, flowers and plants and provide information on gardening to customers. They may operate tractors and other equipment to fertilize and spray fields and plants.

This occupational group also includes cowhands, fruit tree pruners and hydroponics workers.

Education, Training & Experience

- People in this group require different backgrounds depending on their area of work. Many recent entrants have a high school diploma.
- General farm workers may require basic farm knowledge usually obtained from experience. They may complete a college program or other specialized farming course in areas such as farm equipment mechanic, agricultural welding, tree pruning and pesticide application.
- Nursery and greenhouse workers may require a high school diploma, college courses in horticulture or a related field, and a provincial licence to apply chemicals such as fertilizers and pesticides. Employers provide them with on-the-job training.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: C610, T610, C640, U013

NOC 843

In These Occupations...

- 114,000 people were employed in 1998, a decrease of 21.0% from 1988. This reflects a decrease of 10.9% from 1988 to 1993 and 11.3% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 84% are general farm workers and 16% are nursery and greenhouse workers.
- 30% work part-time, well above the average of 19% for all occupations.
- 11% are self-employed, compared to an average of 17% for all occupations.
- 36% are women, compared to an average of 45% for all occupations.
- the unemployment rate averaged 11.8% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for occupations with similar education/training requirements.
- the average earnings are among the lowest for occupations with similar education/training requirements but are comparable to those for other occupations in the primary industry sector.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited" due to long-term employment losses.
- Over the next five years, this outlook is not expected to change, as the number of qualified recent graduates or non-completers seeking work is expected to increase more rapidly than the number of job openings in these and related occupations.
- Agriculture will continue to restructure under competitive pressure and with the opening-up of markets under international trade agreements. The end result will likely be a smaller, more highly skilled agricultural labour force.

Earnings

20 - 29	30 - 39	40 - 49	Age Group
12 000	15 300	18 800	Highest 20%
8 400	10 500	12 300	Average
3 700	4 200	4 300	Lowest 20%

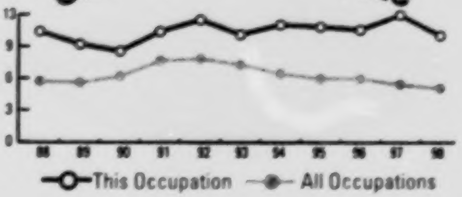
Overall Average for All Ages (15+)

This Occupation	All Occupations
26 700	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

Unemployment Rate



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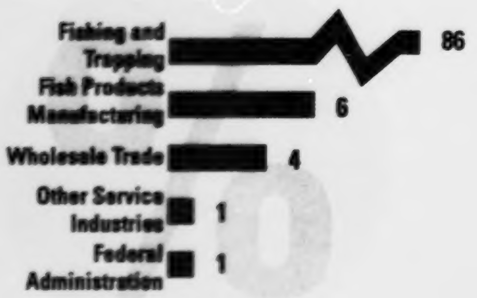
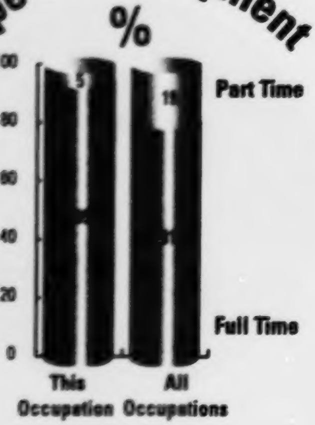
Other Fishing and Trapping Occupations

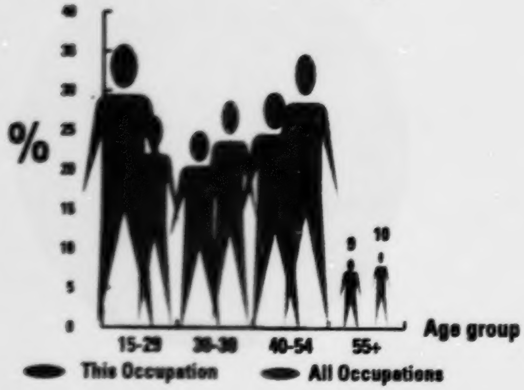
Where They Work



Type of Employment



Distribution by Age



At Work

People in this group work for organizations that operate commercial fishing vessels, or are self-employed fishermen/women, trappers and hunters.

- Fishing vessel deckhands prepare nets, lines and other fishing tackle, and operate fishing gear to catch fish and other marine life. They clean, sort and pack fish; stow catch in holds; repair nets; splice ropes; and maintain fishing gear. They may also steer vessels to and from fishing areas and cook meals for crew members.
- Trappers set and position traps along trails; operate snowmobiles or travel on foot, snowshoes or skis to patrol traplines; kill and skin catch for pelts; and treat and market pelts. They also trap live animals for sale and relocation purposes, and trap designated animals for bounty and other animal control programs.
- Hunters operate boats and snowmobiles or travel on foot to reach hunting areas, kill wild animals with firearms and other weapons, skin animals for pelts, and treat, pack and transport pelts to processing plants and public auctions.

This occupational group also includes icers, crewmen/women and sealers.

Education, Training & Experience

- People in this group require different backgrounds depending on their area of work. Most recent entrants have not completed high school.
- Fishing vessel deckhands must have a commercial fishing licence. Employers provide them with on-the-job training.
- Trawlermen/women require a minimum of one year's experience.
- Trappers and hunters may require trapping or hunting courses in their province of work and a trapping or hunting licence.

Check out the 'big picture' in "World of Work: Overviews and Trends"

In These Occupations...

- 8,000 people were employed in 1998, a decrease of 31.3% from 1988. After rising 4.6% over the 1988 to 1993 period, employment decreased 34.3% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 74% are fishing vessel deckhands and 26% are trappers and hunters.
- 5% work part-time, well below the average of 19% for all occupations.
- 27% are self-employed, compared to an average of 17% for all occupations. The proportion of self-employed in these occupations has decreased significantly over the last ten years.
- 10% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 32.3% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for occupations with similar education/training requirements and for occupations in the primary industry sector.
- the average earnings are comparable to those for other occupations with similar education/training requirements and for other occupations in the primary industry sector.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited" due to large long-term employment losses.
- Over the next five years, this outlook is not expected to change, as employment losses are expected to continue.
- The future of fishing occupations depends on the uncertain future of fish stocks and the industry's ability to diversify the species fished.

Earnings

20 - 29	30 - 39	40 - 49	
34 400	35 200	45 900	**Highest 20%**
21 300	26 200	29 000	**Average**
11 800	13 500	12 900	**Lowest 20%**

Age Group

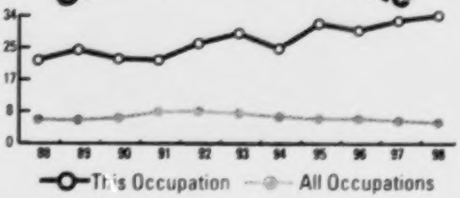
Overall Average for All Ages (15+)

This Occupation	All Occupations
30 200	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

Unemployment Rate



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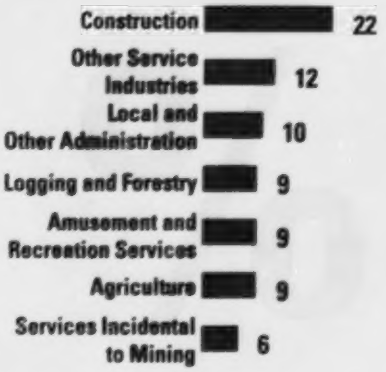
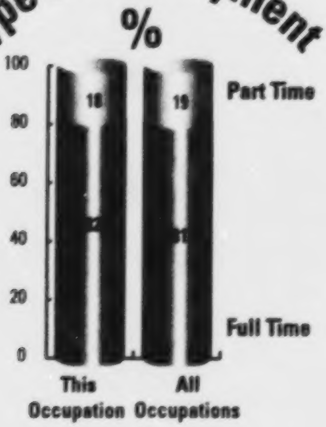
Primary Production Labourers

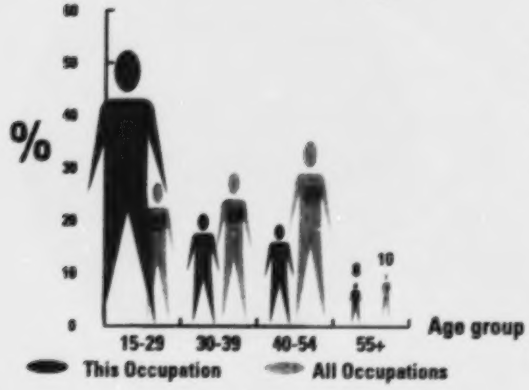
Where They Work



Type of Employment



Distribution by Age



At Work

These labourers work for farmers, orchard owners, landscaping and lawn care companies, landscaping departments, fish hatcheries, aquatic farms, oil and gas drilling and well servicing contractors, mineral miners and petroleum producing companies, logging companies and contractors, golf courses and cemeteries. They assist other workers.

- Harvesting labourers harvest, sort and pack crops.
- Landscaping and grounds maintenance labourers help construct and maintain landscapes by spreading soil, laying sod and planting, cutting, pruning, spraying and dusting flowers, grass, shrubs and trees.
- Aquaculture labourers help maintain fish stock and operate, clean and maintain equipment in fish hatcheries and aquatic farms.
- Marine plant gatherers collect and load seaweed, dulse and Irish moss.
- Shellfish harvesters dig, sort, clean and transport shellfish.
- Mine labourers help maintain, construct and clean underground mines, and load, move, sort and pile materials and supplies.
- Oil and gas drilling, servicing and related labourers handle sections of pipe and drill stems during drilling operations, and clean and maintain equipment.
- Logging and forestry labourers attach chokers and cables to felled trees, plant trees, spray herbicides, clear trails and clean landing areas.

Education, Training & Experience

- These labourers may need a high school diploma and specialized training. Many recent entrants have a high school diploma.
- Landscaping and grounds maintenance labourers may require a licence to apply chemical fertilizers and pesticides.
- Shellfish harvesters require a commercial fishing licence.
- Oil and gas drilling and servicing, logging and forestry labourers may require a Workplace Hazardous Materials Information System (WHMIS), safety or other certificate appropriate to their area of work.

Check out the 'big picture' in "World of Work: Overviews and Trends"

NOC 861

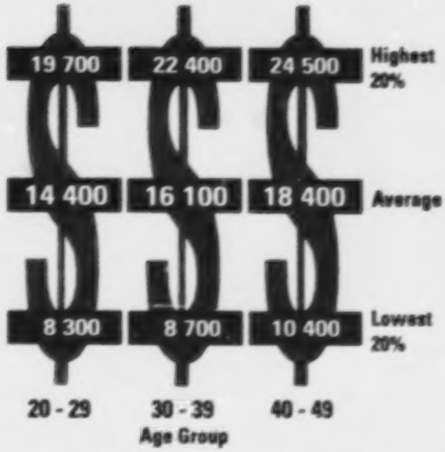
In These Occupations...

- 80,000 people were employed in 1998, an increase of 13.5% from 1988. Most of the growth occurred from 1993 to 1998, when employment increased 9.6%. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 67% are landscaping and grounds maintenance workers and 14% are logging and forestry labourers.
- 18% work part-time, compared to an average of 19% for all occupations.
- 11% are self-employed, compared to an average of 17% for all occupations.
- 17% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 24.1% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for occupations with similar education/training requirements and for occupations in the primary industry sector.
- the average earnings are comparable to those for other occupations with similar education/training requirements and for other occupations in the primary industry sector.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited", since employment opportunities and earnings are both below average.
- Over the next five years, this outlook is not expected to change, as the number of qualified recent graduates or non-completers seeking work is expected to increase more rapidly than the number of job openings in these and related occupations.
- Machinery will continue to replace unskilled labour, resulting in decreased demand for labour in these occupations.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the construction, amusement and recreation services and household and personal services industries.

Earnings



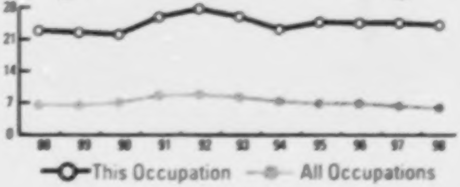
Overall Average for All Ages (15+)

This Occupation	All Occupations
28 200	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

Unemployment Rate



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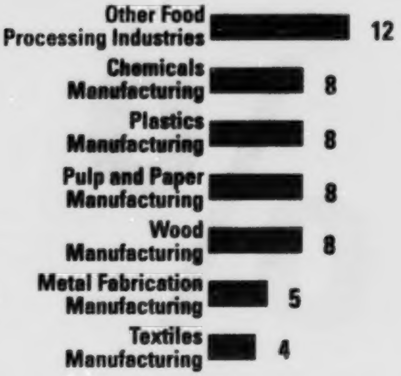
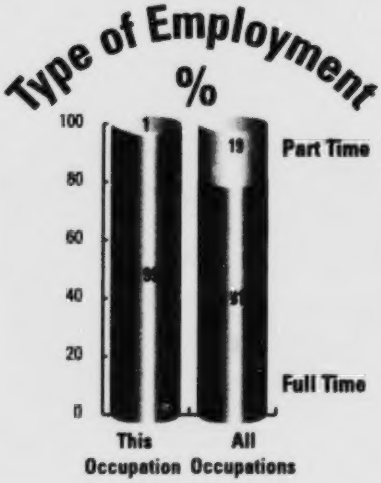
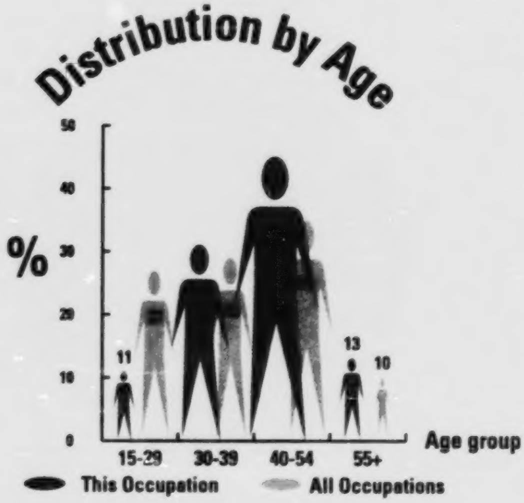
Supervisors, Processing Occupations

Where They Work







At Work

These supervisors work for mineral ore and metal processing plants; petroleum and natural gas processing, pipeline, petrochemical, chemical and pharmaceutical companies; water and waste treatment utilities; fruit and vegetable processing plants; dairies; flour mills; bakeries; sugar refineries; fish and meat plants; breweries; food and beverage and tobacco processing organizations; rubber and plastic products manufacturing companies; pulp and paper companies; paper converting companies; sawmills; planing mills; wood treatment and waferboard plants; and textile companies. Their duties may require them to:

- direct, coordinate and schedule the activities of workers;
- establish methods to meet work schedules and coordinate work with other departments;
- ensure that systems and equipment operate efficiently;
- identify, investigate, correct and document potential environmental and safety problems;
- resolve work problems and recommend measures to improve productivity and product quality;
- requisition materials and supplies;
- train staff in job duties, safety procedures and company policies;
- prepare production and other reports; and
- manage operating budgets.

Education, Training & Experience

- These supervisors usually require a high school diploma. Many recent entrants have a trade/vocational or community college diploma or university degree.
- They usually require several years' experience in their area of work.
- Some may require special certificates and licences.
- Supervisors in food processing may require Hazard Analysis Critical Control Point (HACCP) training.

Check out the 'big picture' in "World of Work: Overviews and Trends"

In These Occupations...

- 58,000 people were employed in 1998, a decrease of 0.8% from 1988. After rising 4.0% over the 1988 to 1993 period, employment decreased 4.5% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 22% of these supervisors are in gas and chemical processing and utilities; 21% are in food, beverage and tobacco processing; 20% are in forest products processing; and 19% are in mineral and metal processing.
- 1% work part-time, well below the average of 19% for all occupations.
- 16% are self-employed, compared to an average of 17% for all occupations.
- 11% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 2.6% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for technical, paraprofessional and skilled occupations and for occupations in the processing, manufacturing and utilities sectors.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations and for occupations in the processing, manufacturing and utilities sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities and earnings are both well above the average levels for comparable occupations.
- Over the next five years, this outlook is not expected to change. The number of job openings for processing supervisors is expected to increase more rapidly than the number of qualified job seekers, mostly due to a high retirement rate in these occupations.
- There may be increased opportunities for new entrants with skills in the application of robotics and of computerized equipment in processing.
- Employment requirements for these occupations are expected to increase across a broad range of industries through 2004.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	40 400	51 300	55 800
Average	30 100	38 600	43 000
Lowest 20%	18 800	25 300	29 100

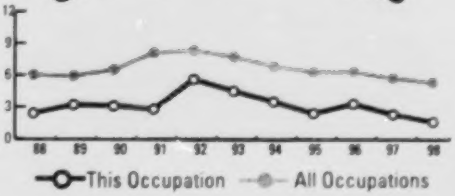
Overall Average for All Ages (15+)

This Occupation	All Occupations
39 400	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

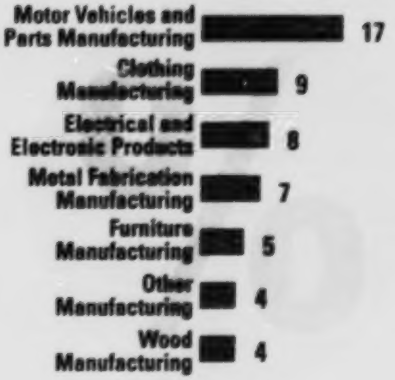
Unemployment Rate



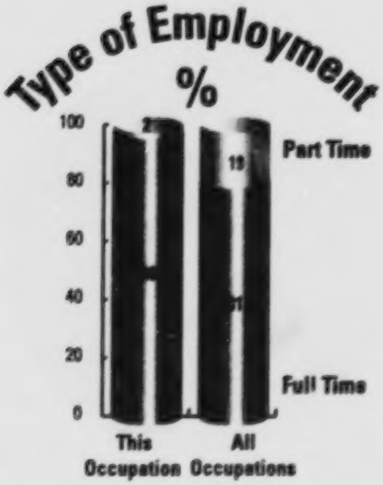
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Supervisors, Assembly and Fabrication

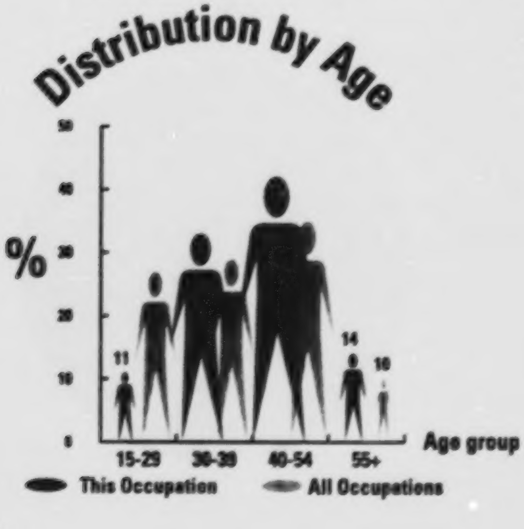
Where They Work



Type of Employment



Distribution by Age



At Work

These supervisors work for manufacturers of automobiles, vans and light trucks, electronics parts, components and systems, electrical components, appliances, motors and industrial equipment, furniture and fixtures, aircraft and aircraft parts, heavy trucks, trailers, buses, motor vehicle engines, transmissions, heating equipment, commercial refrigeration and similar metal products, clothing, fabric products, textiles, leather, and other miscellaneous products such as jewellery, clocks, watches, millwork, sporting goods and toys. Their duties may require them to:

- direct, coordinate and schedule the activities of workers;
- establish methods to meet work schedules and coordinate work with other departments;
- ensure that systems and equipment operate efficiently;
- resolve work problems and recommend measures to improve productivity and product quality;
- requisition materials and supplies;
- train staff in job duties, safety procedures and company policies; and
- prepare production and other reports.

Education, Training & Experience

- These supervisors usually require some high school education or a high school diploma. Many recent entrants have a trade/vocational certificate, a community college diploma or a university degree.
- They usually need several years' experience as assemblers, fabricators, machine operators, testers, lead hands or inspectors, or have performed other work in the same company or industry.
- Supervisors in electronics manufacturing may require a two-year college program in electronics.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: T314, C362, U360, U316, T333, T312

NOC 922

In These Occupations...

- 58,000 people were employed in 1998, an increase of 27.4% from 1988. After employment gains of 16.8% from 1988 to 1993, employment growth slowed to 9.1% from 1993 to 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 30% of these supervisors work in other mechanical and metal products; 19% work in motor vehicle assembling; and the rest work in a wide variety of manufacturing industries.
- 2% work part-time, well below the average of 19% for all occupations.
- 31% are self-employed, well above the average of 17% for all occupations. The proportion of self-employed workers in these occupations has increased significantly over the last ten years.
- 18% of these supervisors are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 2.6% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for technical, paraprofessional and skilled occupations and for occupations in the processing, manufacturing and utilities sectors.
- the average earnings are comparable to those for other technical, paraprofessional and skilled occupations and for other occupations in the processing, manufacturing and utilities sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Good", since employment opportunities are well above average, although earnings are at the average level.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the electrical and electronic products and non-electrical machinery industries.

Earnings

20 - 29	30 - 39	40 - 49	
41 200	49 500	55 000	**Highest 20%**
31 000	37 900	41 900	**Average**
20 100	24 800	26 200	**Lowest 20%**

Age Group

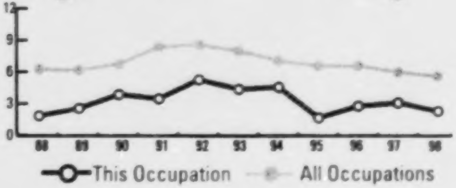
Overall Average for All Ages (15+)

36 200	37 400
This Occupation	**All Occupations**

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

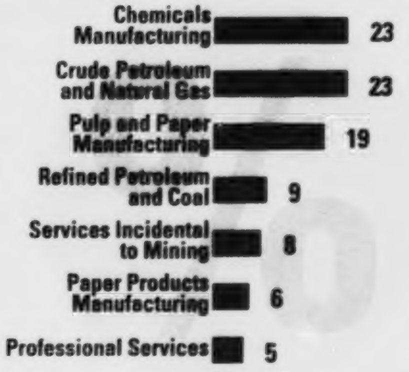
Unemployment Rate



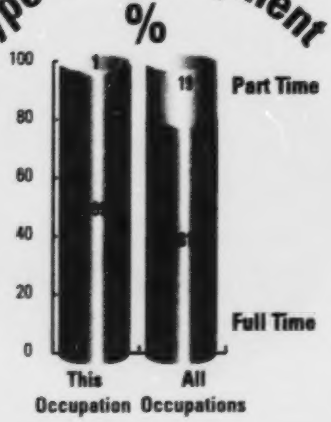
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Central Control and Process Operators in Manufacturing and Processing

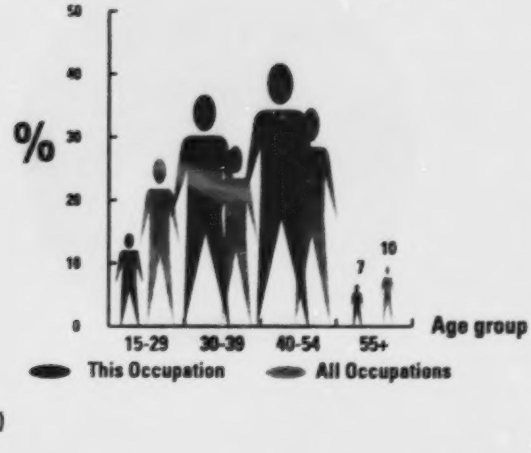
Where They Work



Type of Employment



Distribution by Age



At Work

These operators work in copper, lead, zinc and precious metal refineries; uranium and cement processing and aluminium plants; steel mills; petroleum and natural gas processing, pipeline, petrochemical, industrial, agricultural, specialty chemical, pharmaceutical and pulp and paper companies; and other plants.

- Central control and process operators process mineral ores, metals and cement.
- Petroleum, gas and chemical process operators run and monitor petroleum, petrochemical and chemical plants, and monitor, adjust and maintain processing units and equipment.
- Pulping control operators control the processing of wood, scrap pulp and other cellulose materials to produce pulp.

This occupational group also includes cement manufacturing console operators, beater engineers, pulp and paper cooks and back tenders.

Education, Training & Experience

- These operators usually require a high school diploma. Many recent entrants have a trade/vocational certificate or a community college diploma.
- Most need formal company training, on-the-job training and several years' experience as machine or process operators in the same company or department.
- Some may require an industrial first-aid certificate.
- Petroleum, gas and chemical process operators may need a college diploma in process operation, science or a related subject and various certificates and licences.
- Pulping control operators may require a college or other program in forest products processing or a related subject.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	39 300	47 100	52 400
Average	30 900	37 000	41 000
Lowest 20%	21 100	26 600	30 800

Age Group

Overall Average for All Ages (15+)

This Occupation	All Occupations
44 100	37 400

In These Occupations...

- 24,000 people were employed in 1998, a decrease of 16.6% from 1988. However, after declining 20.4% over the 1988 to 1993 period, employment increased 4.8% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 55% are petroleum, gas and chemical process operators and 23% are central control process operators.
- 1% work part-time, well below the average of 19% for all occupations.
- 1% are self-employed, well below the average of 17% for all occupations.
- 11% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 3.6% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations in the processing, manufacturing and utilities sectors.
- the average earnings are among the highest for technical, paraprofessional and skilled occupations and for occupations in the processing, manufacturing and utilities sectors.
- employment changes tend to mirror movements in overall economic activity.

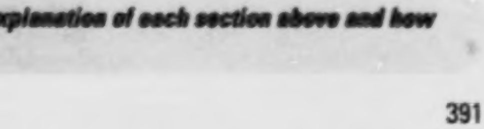
National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited" as a result of large long-term employment losses.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Computer-integrated systems and advanced manufacturing technologies are increasing the level of computer skills needed by these operators.
- Employment requirements for these occupations are expected to increase across a broad range of industries through 2004.

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

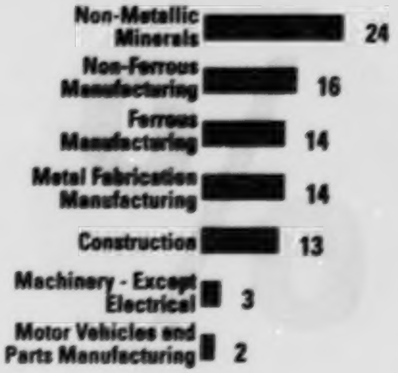
Unemployment Rate

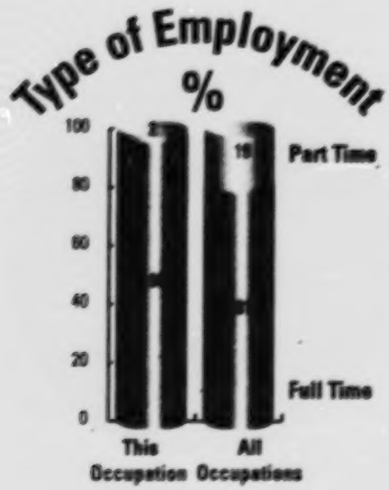


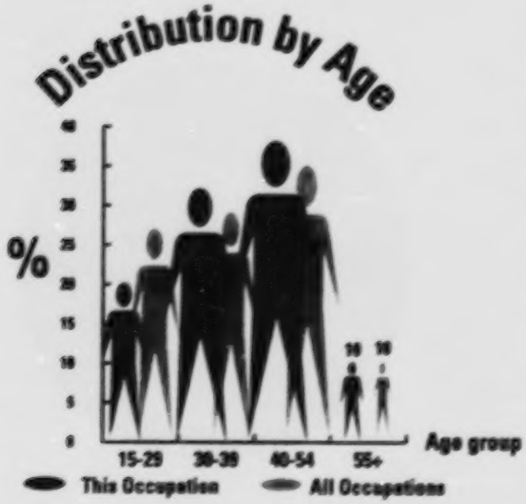
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Machine Operators and Related Workers in Metal and Mineral Products Processing

Where They Work







At Work

People in this group work in copper, lead and zinc refineries; uranium processing plants; steel mills; aluminum plants; precious metal refineries; cement processing and other mineral and metal processing plants; foundries; and glass and glass products, concrete, clay and stone manufacturing companies.

- Machine operators in mineral and metal processing prepare and treat mineral ore and metal products.
- Foundry workers make foundry moulds and cores by hand or machine, pour molten metal into moulds to produce castings and operate foundry furnaces to melt metals.
- Glass forming and finishing operators produce glass, glassware, bottles and other glass products.
- Glass cutters hand-cut flat glass to specified sizes and shapes.
- Concrete, clay and stone forming and finishing operators cast and finish concrete products, and produce concrete, clay and stone products.
- Inspectors and testers in mineral and metal processing inspect, grade, sample and test raw materials and products made during these processing operations.

Education, Training & Experience

- People in this group usually need some high school education. Many recent entrants have a high school diploma.
- They usually require experience as labourers or machine operator helpers or in other helper positions in their area of work.
- Mould makers for concrete products may require carpentry or woodworking experience for working with wooden forms.
- Inspectors and testers in mineral and metal processing may require experience as machine or process operators in that area of work.

Check out the 'big picture' in "World of Work: Overviews and Trends"

NOC 941

In These Occupations...

- 36,000 people were employed in 1998, a decrease of 10.1% from 1988. However, after declining 17.3% over the 1988 to 1993 period, employment increased 8.7% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 28% are machine operators in mineral and metal processing; 25% are foundry workers; and 20% are concrete, clay and stone forming operators.
- 2% work part-time, well below the average of 19% for all occupations.
- 2% are self-employed, well below the average of 17% for all occupations.
- 11% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 6.3% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the highest for occupations with similar education/training requirements and are comparable to those for other occupations in the processing, manufacturing and utilities sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited" as a result of large long-term employment losses.
- Over the next five years, the outlook is expected to improve to "Fair". The number of job openings is expected to increase more rapidly than the number of qualified job seekers, due to employment growth and the outflow of experienced workers from these occupations.
- New technology will require that foundry workers develop computer skills.
- Employment requirements for these occupations are expected to increase across a broad range of industries through 2004, with much of the increase in the non-metallic minerals and non-ferrous manufacturing industries.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	39 800	52 000	57 600
Average	29 500	38 900	44 300
Lowest 20%	18 900	27 500	31 000

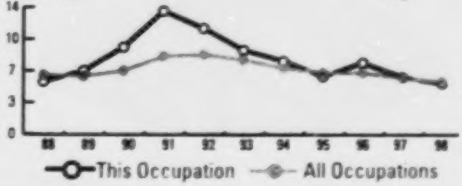
Overall Average for All Ages (15+)

This Occupation	All Occupations
38 000	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	[✓ FAIR]
[✓ LIMITED]	LIMITED

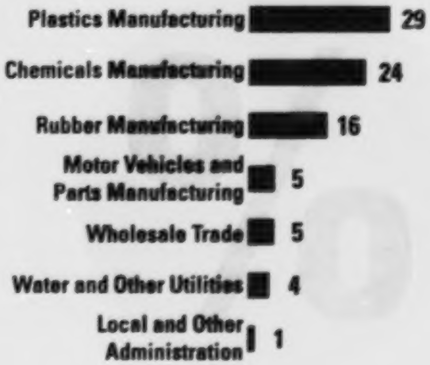
Unemployment Rate

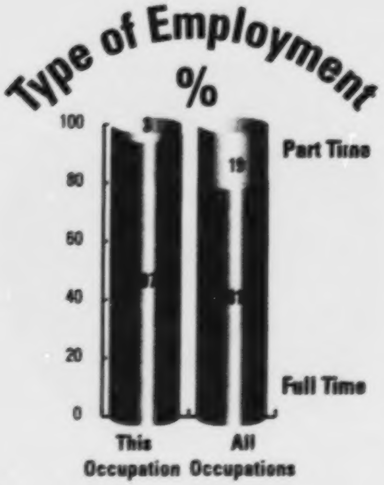


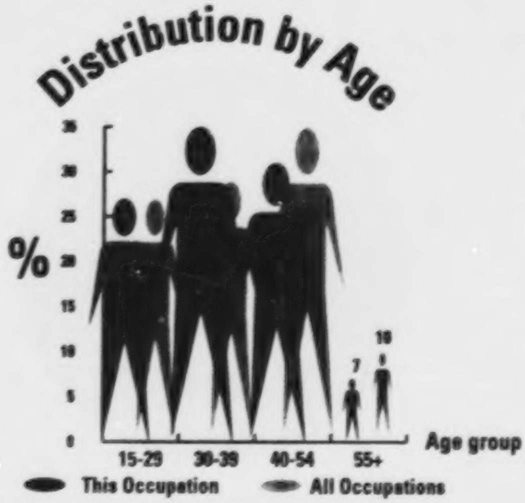
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Machine Operators and Related Workers in Chemical, Plastic and Rubber Processing

Where They Work







At Work

People in this group work for chemical, cleaning compound, ink and adhesive industries; plastics and rubber products manufacturing companies; tire manufacturers; municipal governments; and other industries, institutions and organizations.

- Chemical plant machine operators run machinery to blend, mix, process and package a wide range of specialty chemicals, pharmaceuticals, and cleaning and toiletry products.
- Plastics processing machine operators set up and run mixing, calendering, extruding and moulding machines used to manufacture plastic parts and products.
- Rubber processing assemblers run moulding, laminating, calendering and extruding machinery and equipment.
- Rubber processing inspectors examine finished rubber products.
- Water and waste plant operators monitor and run computerized control systems and related equipment to regulate water treatment and distribution, and the treatment and disposal of sewage and wastes.

Education, Training & Experience

- People in this group usually need some high school or a high school diploma and relevant industry or college courses.
- Some require on-the-job training and related work experience.
- Most occupations require training in the Workplace Hazardous Materials Information System (WHMIS), Statistical Process Control System (SPC) and electronics systems.
- Plastics moulding process operators may need hydraulics, pneumatics and electronics systems courses.
- Rubber plant machinery operators usually need a high school diploma and good math and computer skills.
- Water and waste plant operators must have courses in water pollution control.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: C640, C610, T610, U710, T381

NOC 942

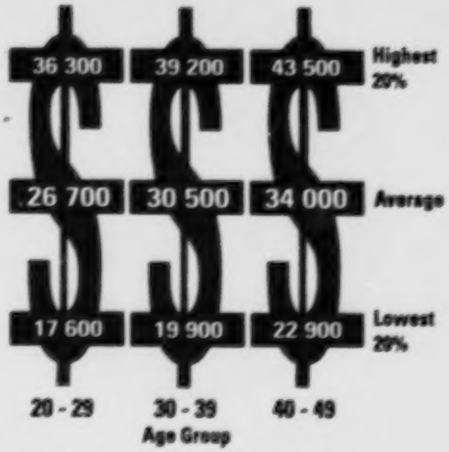
In These Occupations...

- 53,000 people were employed in 1998, an increase of 15.5% from 1988. After declining 11.3% over the 1988 to 1993 period, employment increased 30.3% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 41% are plastics processing machine operators; 24% are chemical plant operators; and 23% are rubber processing machine operators.
- 3% work part-time, well below the average of 19% for all occupations.
- 1% are self-employed, well below the average of 17% for all occupations.
- 25% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 6.3% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are comparable to those for other occupations with similar education/training requirements and for other occupations in the processing, manufacturing and utilities sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Continuing demand for lighter and stronger materials in manufactured goods should favour the demand for this occupational group.
- New equipment in the plastics industry is more complex and computer controlled. Increasing use of computerized equipment in these occupations could improve prospects for new entrants with appropriate education or experience.
- Most of the growth in employment requirements through 2004 for these occupations is expected to occur in the plastics manufacturing and rubber manufacturing industries.

Earnings



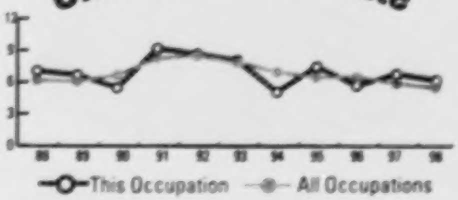
Overall Average for All Ages (15+)

This Occupation	All Occupations
35 000	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

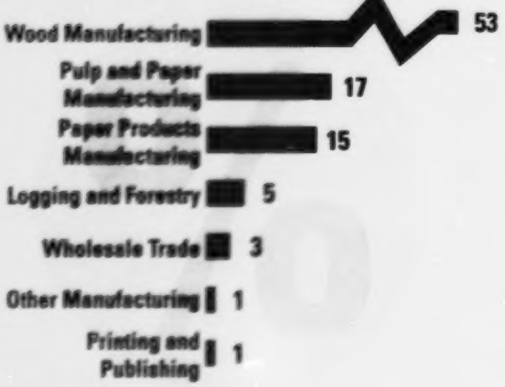
Unemployment Rate



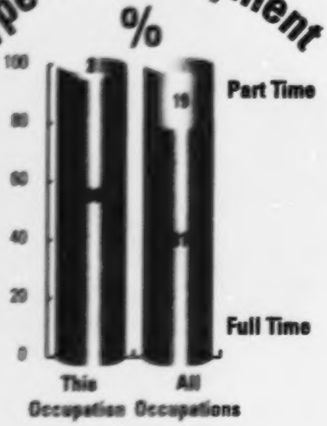
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Machine Operators and Related Workers in Pulp and Paper Production and Wood Processing

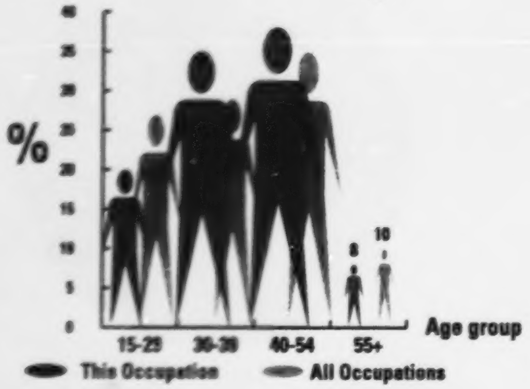
Where They Work



Type of Employment



Distribution by Age



At Work

People in this group work for sawmills, planing mills, pulp and paper and other wood processing companies, wood treatment and waferboard plants, and paper products manufacturers.

- Sawmill machine operators control automated equipment to saw, trim and plane rough lumber, and saw and split shingles and shakes.
- Pulp mill machine operators run and monitor screening equipment, digesters, mixing tanks and other machinery to produce pulp.
- Other wood processing machine operators remove bark from logs, produce wood chips, preserve and treat wood and produce waferboard, plywood and similar wood products.
- Lumber graders and other wood processing inspectors and graders inspect and grade lumber, shingles, particle board and similar products.

Education, Training & Experience

- People in this group usually need some high school or a high school diploma. Many recent entrants have a high school diploma.
- Employers usually provide on-the-job training and may provide formal training.
- They may require experience in operating various machines as labourers or utility maintenance workers.
- They may need an industrial first-aid certificate.
- Pulp mill machine operators may require a college diploma in forest products processing or a related subject.
- Wood processing operators may need college or company courses.
- Lumber graders require a lumber grader's licence issued by a provincial lumber association.

Check out the 'big picture' in "World of Work: Overviews and Trends"

NOC 943

In These Occupations...

- 48,000 people were employed in 1998, a decrease of 0.2% from 1988. However, after declining 12.9% over the 1988 to 1993 period, employment increased 14.5% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 31% are sawmill machine operators and the rest work in a variety of occupations in pulp and paper processing and wood processing.
- 2% work part-time, well below the average of 19% for all occupations.
- 3% are self-employed, well below the average of 17% for all occupations.
- 10% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 6.8% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the highest for occupations with similar education/training requirements and are comparable to those for other occupations in the processing, manufacturing and utilities sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities are average, although earnings are above the average level for comparable occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Increasing use of computerized equipment could improve prospects for new entrants with appropriate education or experience.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	38 500	45 700	48 300
Average	27 800	34 300	37 000
Lowest 20%	17 600	22 700	24 400

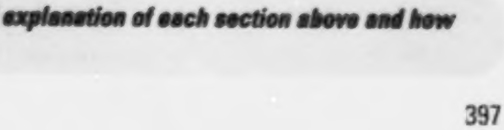
Overall Average for All Ages (15+)

This Occupation	All Occupations
38 100	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

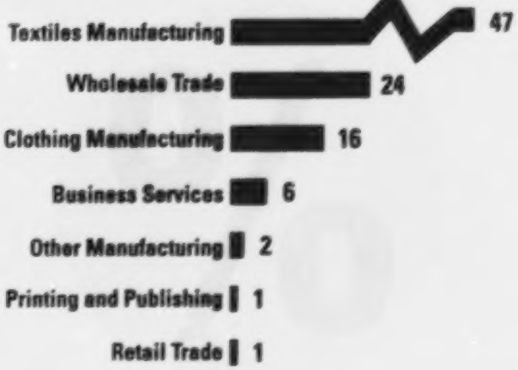
Unemployment Rate



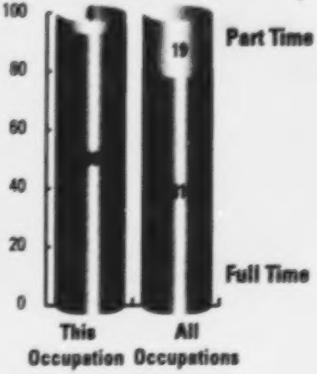
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Machine Operators and Related Workers in Textile Processing

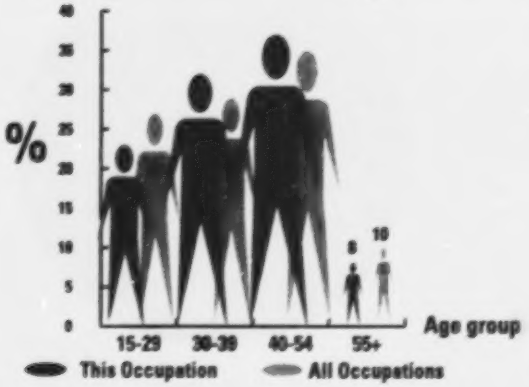
Where They Work



Type of Employment %



Distribution by Age



At Work

People in this group work in textile manufacturing companies and garment, mattress and other fabric products manufacturing companies. Their job duties may require them to operate specialized machinery.

- Textile fibre and yarn preparation machine operators prepare textile fibres and spin, wind, reel and twist yarn and thread.
- Weavers operate looms to weave yarn and thread into textile fabrics and products.
- Other weaving workers reproduce patterns, perform drawing-in and warp tying activities and set up looms.
- Knitting machine operators produce knitted fabric, hosiery, garments and other products.
- Textile dyeing and finishing machine operators bleach, dye and finish yarn, thread, cloth and textile products.
- Textile inspectors, graders and samplers prepare samples and inspect and grade textile products.

This occupational group also includes card tenders, wool scourers, textile printing operators and perch operators.

Education, Training & Experience

- People in this group may need some high school or a high school diploma, or college education. Many recent entrants have a high school diploma.
- They may receive on-the-job training; its length depends on the complexity of the product or process, the number of machines they will operate and whether they will perform equipment set-up and maintenance.
- Weavers, knitters and other workers in fabric-making occupations may require experience as labourers in their company.
- Textile inspectors, graders and samplers who inspect valuable and complex products may require experience as weavers, knitters or other fabric-making operators.

Check out the 'big picture' in "World of Work: Overviews and Trends"

NOC 944

In These Occupations...

- 23,000 people were employed in 1998, a decrease of 14.6% from 1988. However, after declining 21.0% over the 1988 to 1993 period, employment increased 8.1% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 38% are weavers, knitters and other fabric-making operators; 24% are textile fibre and yarn preparation machine operators; and 21% are textile dyeing and finishing machine operators.
- 4% work part-time, well below the average of 19% for all occupations.
- 4% are self-employed, well below the average of 17% for all occupations.
- 42% are women, compared to an average of 45% for all occupations. The proportion of women employed in these occupations has decreased significantly in the past ten years.
- the unemployment rate averaged 7.9% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the lowest for occupations with similar education/training requirements and for occupations in the processing, manufacturing and utilities sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited" as a result of past employment losses.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers, due to an expected rise in retirements.
- Increasing use of robotics and computerized manufacturing technologies will require new entrants to have higher literacy and numeracy skills than in the past.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the textiles manufacturing industry.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	42 100	54 200	56 200
Average	31 200	40 800	42 100
Lowest 20%	20 500	26 100	27 000

Age Group

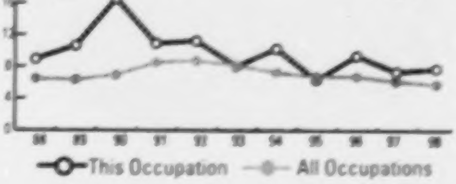
Overall Average for All Ages (15+)

This Occupation	All Occupations
28 100	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

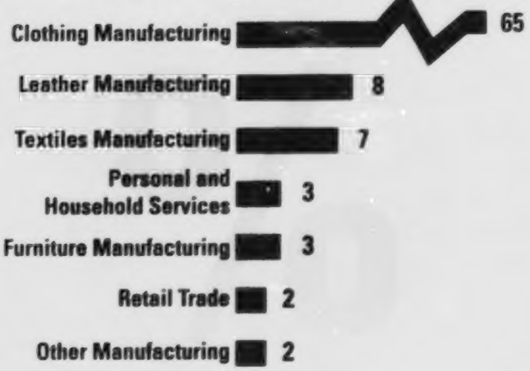
Unemployment Rate



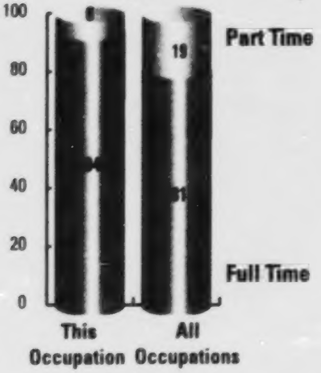
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Machine Operators and Related Workers in Fabric, Fur and Leather Products Manufacturing

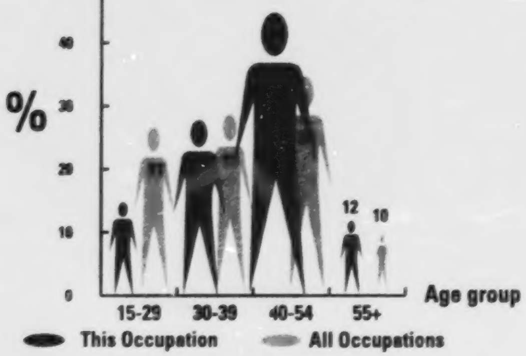
Where They Work



Type of Employment



Distribution by Age



At Work

People in this group work for furriers; manufacturers of clothing, footwear, textile and fur products; and companies that provide services such as leather tanning, fur dressing, and leather and fur dyeing.

- Sewing machine operators sew fabric, fur and synthetic materials to produce and repair garments and other articles. They also operate tackers, buttonhole makers, hemmers and other machines.
- Fabric cutters cut fabric to make parts for garments and other articles. They frequently use computerized cutting devices.
- Fur cutters cut pelts to make parts for garments and other articles.
- Leather cutters make parts for shoes, garments and other articles.
- Hide and pelt processing workers trim, scrape, clean, tan, buff and dye animal hides, pelts and skins to produce leather stock and finished furs.
- Inspectors and testers in fabric, fur and leather products manufacturing inspect and grade hides, pelts, leather, and garments and other manufactured fabric, fur and leather products.

Education, Training & Experience

- People in this group usually need some high school education or a high school diploma. Most recent entrants have not completed high school or have a high school diploma.
- They usually require experience in the manufacturing of products.

Check out the 'big picture' in "World of Work: Overviews and Trends"

NOC 945

In These Occupations...

- 79,000 people were employed in 1998, a decrease of 19.9% from 1988. However, after declining 28.0% over the 1988 to 1993 period, employment increased 11.3% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 84% are sewing machine operators and 9% are fur, fabric and leather cutters.
- 6% work part-time, well below the average of 19% for all occupations.
- 8% are self-employed, compared to an average of 17% for all occupations.
- 83% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 9.9% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the lowest for occupations with similar education/training requirements and for occupations in the processing, manufacturing and utilities sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited" as a result of large, long-term employment losses.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	31 900	41 500	39 800
Average	24 200	30 900	30 700
Lowest 20%	15 900	19 900	20 000

Age Group

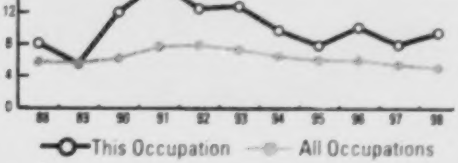
Overall Average for All Ages (15+)

This Occupation	All Occupations
22 700	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

Unemployment Rate



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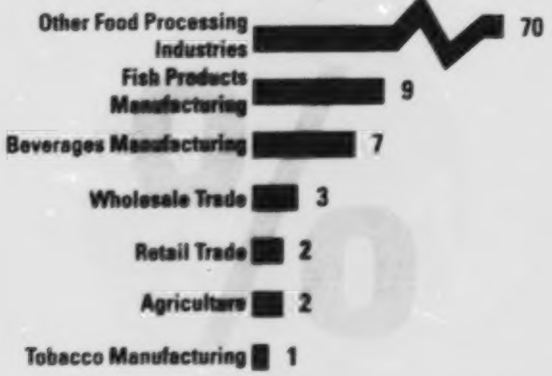
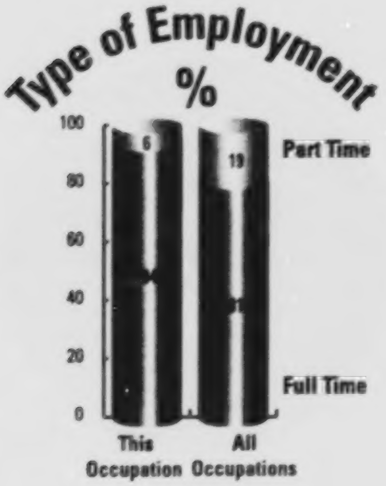
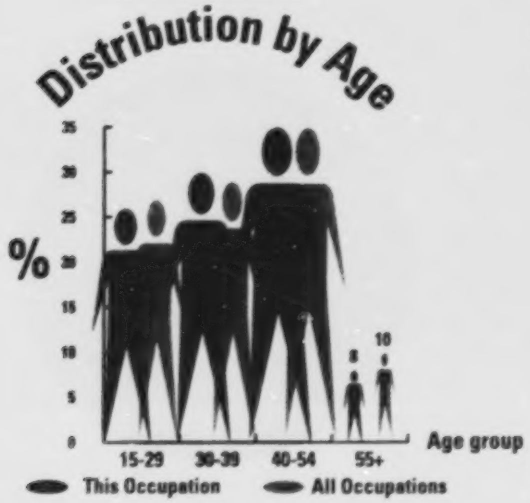
Machine Operators and Related Workers in Food, Beverage and Tobacco Processing

Where They Work







At Work

People in this group work in fruit and vegetable processing plants; dairies; flour mills; bakeries; sugar refineries; breweries; distilleries; meat and poultry slaughtering, processing and packing companies; fish and tobacco processing plants; and other organizations.

- Process control and machine operators use multi-function or single-function machines to process and package food and beverage products.
- Industrial butchers slaughter livestock and split carcasses into smaller portions. They may slaughter livestock according to religious laws.
- Industrial meat cutters cut carcasses for further cutting or processing, and cut meat and poultry into specific cuts for wholesale use.
- Fish plant machine operators process and package fish products.
- Fish plant cutters and cleaners cut, trim and clean fish by hand.
- Tobacco processing machine operators prepare and treat tobacco leaves and produce tobacco products.
- Testers and graders working in food and beverage processing test and grade ingredients and finished food, beverage and tobacco products.

Education, Training & Experience

- People in this group may require some high school education or a high school diploma. Many recent entrants have a high school diploma.
- They may require experience in their particular industry or occupation.
- They usually receive on-the-job training.
- Industrial meat cutters must complete an industrial meat cutting program or have experience as industrial butchers or trimmers.

Check out the 'big picture' in "World of Work: Overviews and Trends"

NOC 946

In These Occupations...

- 63,000 people were employed in 1998, a decrease of 3.1% from 1988. However, after declining 13.6% over the 1988 to 1993 period, employment increased 12.2% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 44% are process control and machine operators in food and beverage processing and 29% are industrial butchers and meat cutters.
- 6% work part-time, well below the average of 19% for all occupations.
- 1% are self-employed, well below the average of 17% for all occupations.
- 36% are women, compared to an average of 45% for all occupations.
- the unemployment rate averaged 11.4% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for occupations with similar education/training requirements and for occupations in the processing, manufacturing and utilities sectors.
- the average earnings are among the lowest for occupations with similar education/training requirements and for occupations in the processing, manufacturing and utilities sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited", since employment opportunities and earnings are both well below average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- The growing use of computerized machinery means that these operators will need to be knowledgeable in a variety of specialized computer applications.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the food processing industry.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	40 000	52 400	59 700
Average	30 700	40 400	44 000
Lowest 20%	21 200	27 600	29 400

Age Group

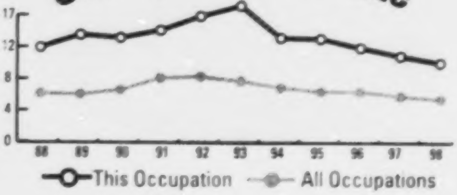
Overall Average for All Ages (15+)

This Occupation	All Occupations
29 400	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

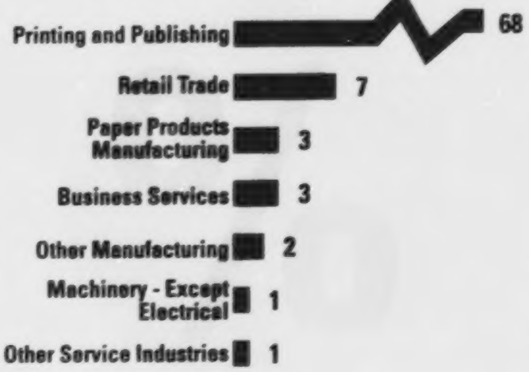
Unemployment Rate

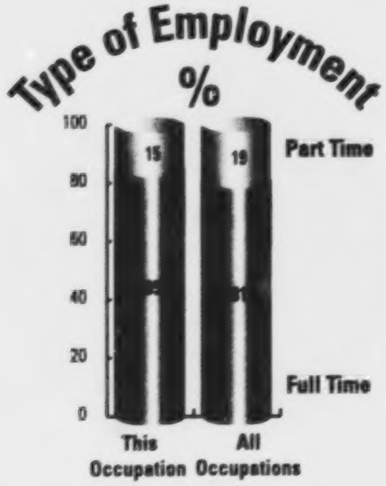


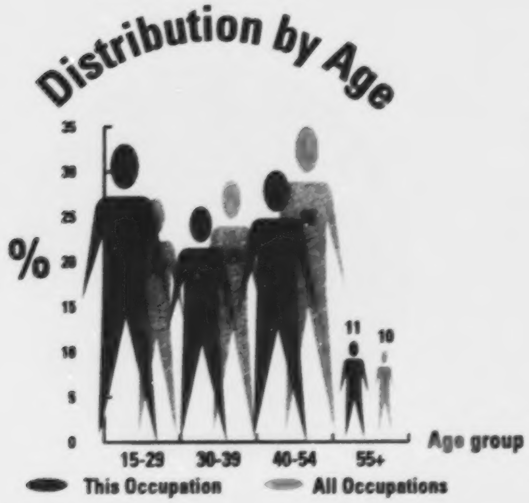
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Printing Machine Operators and Related Occupations

Where They Work







At Work

These people work for rapid printing services, commercial printing companies and in-house binding and finishing departments; colour graphics, platemaking and cylinder preparation firms; newspapers; magazines; film processing and retail photofinishing organizations; and government.

- Printing machine operators use laser printers, computerized high-speed colour copiers and other printing machines to print text, illustrations and designs.
- Printing press operators print illustrations, designs and text on paper, plastic and other material. They may supervise crews of large presses.
- Camera and platemaking workers operate cameras and scanners, assemble film and negatives, and prepare, engrave and etch printing press plates and cylinders.

This occupational group also includes photographic and film processors, cylinder preparers, film assemblers/strippers, platemakers, pre-press technicians, scanner operators, and binding and finishing machine operators.

Education, Training & Experience

- People in this group usually must have a high school diploma. Some receive on-the-job training. Many recent entrants have a high school diploma.
- Printing machine operators may require college or other printing courses.
- Printing press operators usually require a college printing technology diploma, or an apprenticeship, or a combination of on-the-job training and specialized courses.
- Camera, platemaking and other workers in pre-press occupations and binding and finishing machine operators require a college program in graphic arts technology, or an apprenticeship, or a combination of on-the-job training and specialized courses.

Check out the 'big picture' in "World of Work: Overviews and Trends"

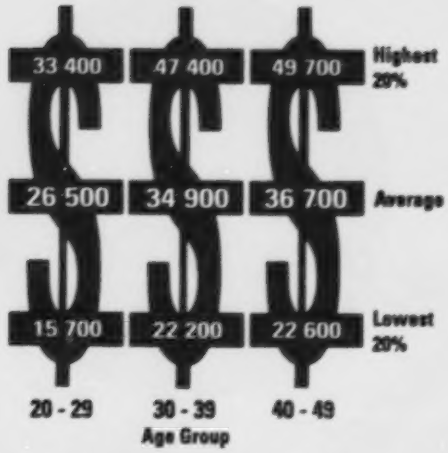
In These Occupations...

- 27,000 people were employed in 1998, a decrease of 13.4% from 1988. However, after declining 19.1% over the 1988 to 1993 period, employment increased 7.0% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 33% are printing press and printing machine operators; 26% are binding and finishing machine operators; and 25% are photographic and film processors.
- 15% work part-time, compared to an average of 19% for all occupations. The proportion of part-time workers in these occupations has increased significantly over the last ten years.
- 6% are self-employed, well below the average of 17% for all occupations.
- 48% are women, compared to an average of 45% for all occupations.
- the unemployment rate averaged 7.2% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are comparable to those for other occupations with similar education/training requirements and for other occupations in the processing, manufacturing and utilities sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited" as a result of large long-term employment losses.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Traditional pre-press occupations are being affected by rapid technological change. These jobs are increasingly being done electronically, blurring the distinctions among the various pre-press occupations.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the printing and publishing industry.

Earnings



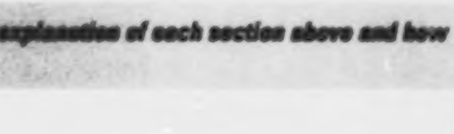
Overall Average for All Ages (15+)

32 500	37 400
This Occupation	**All Occupations**

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

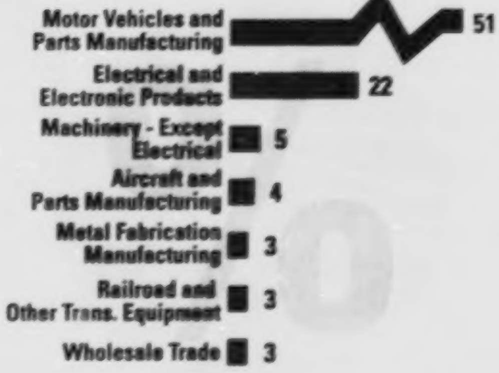
Unemployment Rate

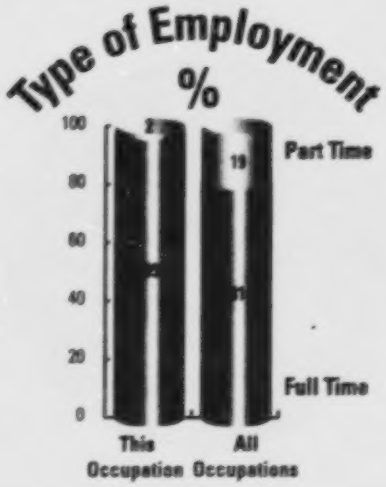


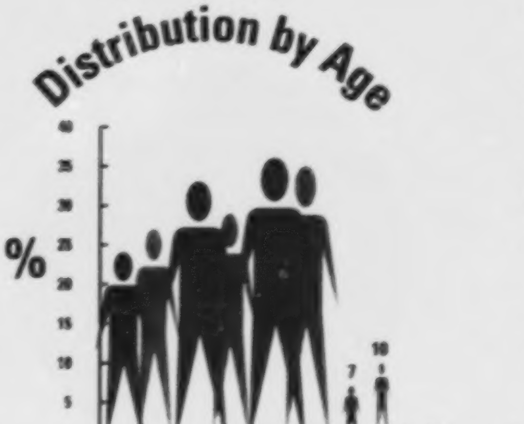
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Mechanical, Electrical and Electronics Assemblers

Where They Work







At Work

These people work for manufacturers of aircraft and aircraft subassemblies, motor vehicles, electronics, electrical appliances and electrical equipment, machinery and transportation equipment, industrial electric motors, transformers, control equipment, railway locomotives, transit vehicles and other heavy electrical equipment.

- Aircraft assemblers work with prefabricated parts to manufacture aircraft subassemblies and aircraft.
- Motor vehicle assemblers work with motor vehicle parts to produce subassemblies and finished motor vehicles.
- Assemblers of electrical appliances, apparatus and equipment work with prefabricated parts to produce household, commercial and industrial appliances and equipment.
- Assemblers and fabricators of industrial electrical motors and transformers produce heavy-duty industrial electrical equipment.
- Mechanical assemblers produce a wide variety of mechanical products such as trucks, buses and automotive engines.
- Operators of electrical apparatus manufacturing machinery or equipment produce electrical parts and products.
- Inspectors and testers inspect and test products for conformity to standards and specifications.

Education, Training & Experience

- People in this group usually need some high school or a high school diploma. Many recent entrants have a high school diploma.
- Aircraft assemblers and inspectors may require aviation or aeronautical technology programs emphasizing aircraft manufacturing.
- Inspectors and testers usually require experience as assemblers or other workers in their companies or industries.

In These Occupations...

- 148,000 people were employed in 1998, an increase of 17.9% from 1988. After declining 20.0% over the 1988 to 1993 period, employment increased 47.5% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 9482, 9483
Part 2 Field of Study Cross-index: T362, C315, C382, C380, T383, T333, C362

NOC 948

- 48% are motor vehicle assemblers, inspectors and testers; 19% are electronics assemblers, fabricators and inspectors; and 14% are mechanical assemblers and inspectors.
- 2% work part-time, well below the average of 19% for all occupations.
- 1% are self-employed, well below the average of 17% for all occupations.
- 33% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 6.2% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the highest for occupations with similar education/training requirements and are comparable to those for other occupations in the processing, manufacturing and utilities sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities are average, although earnings are above the average level for comparable occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Increasingly sophisticated manufacturing processes in the automotive, aircraft and electronics manufacturing industries are likely to require considerable skill upgrading among assemblers, fabricators, inspectors and testers in these industries.
- Globalization of manufacturing in the industries which employ these workers will mean that jobs will go to the countries with either the most advanced technologies or the lowest pay levels. To remain competitive, Canadian workers will need to be highly skilled in the use of advanced manufacturing technologies.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the electrical and electronic products industry.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	45 200	48 500	53 800
Average	32 500	35 400	39 700
Lowest 20%	20 600	22 300	25 800

Age Group

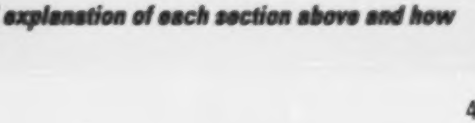
Overall Average for All Ages (15+)

This Occupation	All Occupations
35 300	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate



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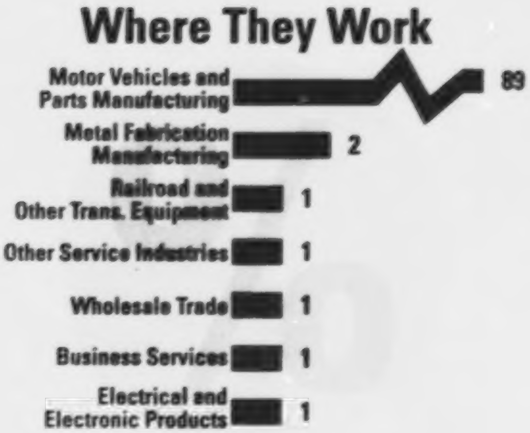
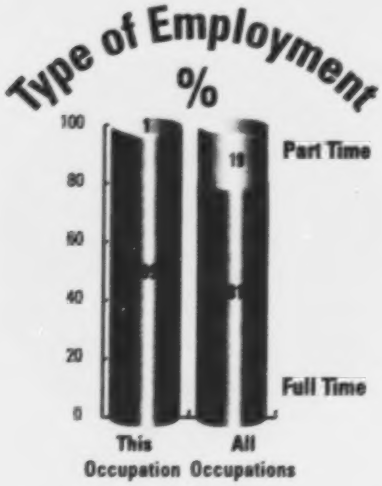
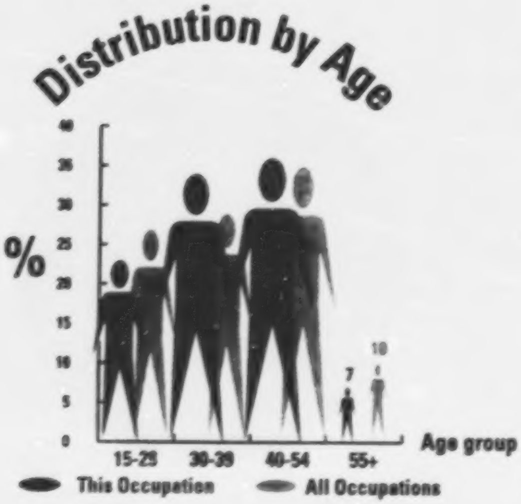
Motor Vehicle Assemblers, Inspectors and Testers







At Work

People in this occupation work in plants that manufacture automobiles, vans and light trucks.

- Motor vehicle assemblers put together and install prefabricated motor vehicle parts and components to form subassemblies and finished motor vehicles. They may use hand and power tools and equipment, and automated assembling equipment such as robotic and fixed automation equipment.
- Motor vehicle inspectors and testers inspect and test parts, subassemblies and finished products to ensure that they perform properly and conform to quality standards. They may use testing devices such as meters, analyzers and timing lights, and drive and test motor vehicles on roll testing devices to make sure that vehicles function properly.

Education, Training & Experience

- People in this occupation usually need a high school diploma. Many recent entrants have a high school diploma.
- They normally gain the skills required for their occupation through on-the-job training.
- They may have job mobility within the same production department.
- With experience, they may progress to supervisory positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

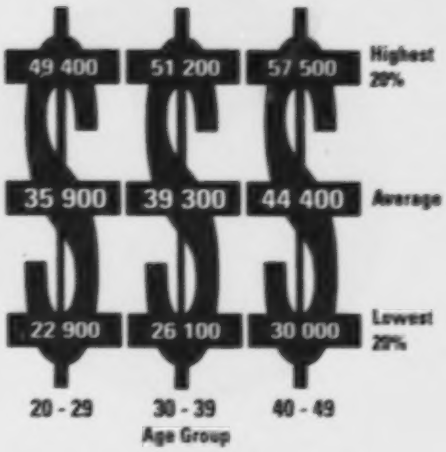
In These Occupations...

- 70,000 people were employed in 1998, an increase of 42.1% from 1988. After declining 5.0% over the 1988 to 1993 period, employment increased 49.6% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 1% work part-time, well below the average of 19% for all occupations.
- 1% are self-employed, well below the average of 17% for all occupations.
- 29% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 5.5% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the highest for occupations with similar education/training requirements and for occupations in the processing, manufacturing and utilities sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since employment opportunities are above average and earnings are well above the average level for comparable occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Labour market conditions may be better for those who can demonstrate an aptitude for working with high-technology applications in assembly as the use of robotics and computer-controlled equipment continues to grow in the motor vehicle industry.
- Globalization of automotive manufacturing operations will mean that plants in Canada will compete increasingly with those in the U.S. and overseas for work.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the motor vehicle industry.

Earnings



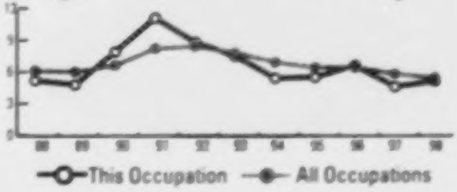
Overall Average for All Ages (15+)

39 100	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	**GOOD**
FAIR	FAIR
LIMITED	LIMITED

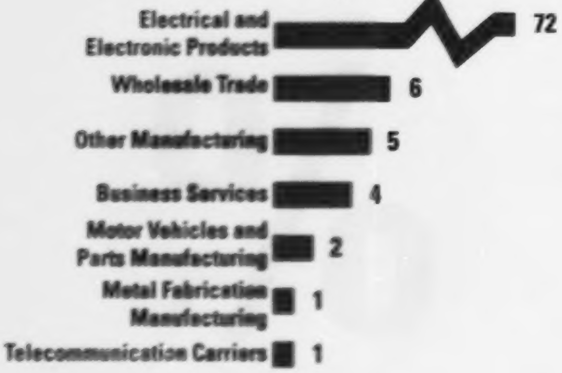
Unemployment Rate



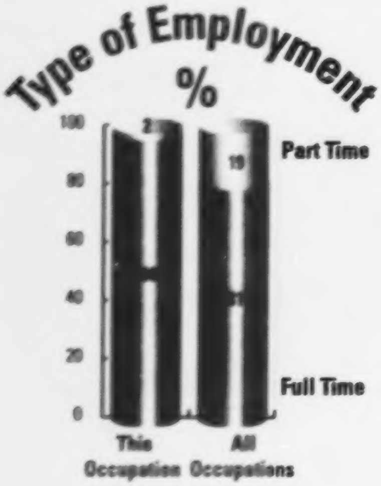
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Electronics Assemblers, Fabricators, Inspectors and Testers

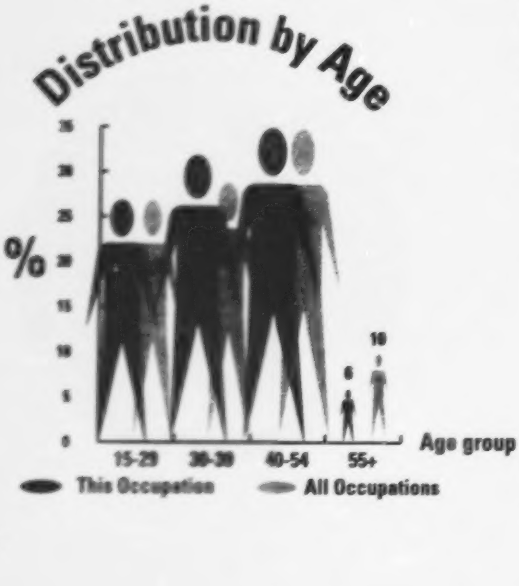
Where They Work



Type of Employment



Distribution by Age



At Work

People in this occupation work in electronics manufacturing plants and in a wide variety of other manufacturing industries.

- Electronics assemblers solder and manually assemble electronic components such as resistors, diodes, transistors, capacitors and integrated circuits to designated locations on printed circuit boards. They perform fine hand assembly using microscopes, hand and small power tools and automatic and semi-automatic machines.
- Electronics fabricators operate and monitor process equipment including automatic and semi-automatic machines to fabricate electronic components and solder, clean, seal and stamp components.
- Electronics inspectors check assembled and fabricated electronic components and assemblies to make sure they conform to specified requirements. They inspect final assemblies for finish, labelling and packaging and perform go - no go electrical tests to check mechanical dimensions.
- Electronics testers operate test equipment and tools to perform simple electrical and continuity testing of electronic components, parts and systems. They compare test results to specifications, and identify parts and products for repair and replacement.

Education, Training & Experience

- People in this occupation usually must complete some high school. Most recent entrants have a high school or community college diploma.
- Electronics testers may require specialized training after high school in basic electronic theory, testing techniques and testing equipment.
- Electronics inspectors may need experience as electronics assemblers or component fabricators.
- With additional training and experience, electronics assemblers and component fabricators may progress to electronics inspector and tester positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 948
Part 2 Field of Study Cross-index: U360, C362, T362, T720

NOC 9483

In These Occupations...

- 29,000 people were employed in 1998, an increase of 28.6% from 1988. After declining 17.3% over the 1988 to 1993 period, employment increased 55.4% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 2% work part-time, well below the average of 19% for all occupations.
- 1% are self-employed, well below the average of 17% for all occupations.
- 58% are women, well above the average of 45% for all occupations.
- the unemployment rate averaged 5.5% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the lowest for occupations with similar education/training requirements and for occupations in the processing, manufacturing and utilities sectors.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities and earnings are both at average levels.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Demand from employers will continue to grow, given increasing consumer demand for computers and other electronic equipment. However, the domestic economy has failed to capture many assembly-line jobs created by the explosion of computer use, and most electronic products are assembled overseas.
- Almost all of the increase in employment requirements through 2004 for this occupation is expected to occur in the electrical and electronic products industry.

Earnings

Age Group	20 - 29	30 - 39	40 - 49
Highest 20%	33 400	37 800	42 800
Average	25 700	27 700	32 200
Lowest 20%	17 700	17 500	20 900

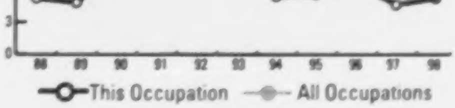
Overall Average for All Ages (15+)

This Occupation	All Occupations
28 400	37 400

Work Prospects

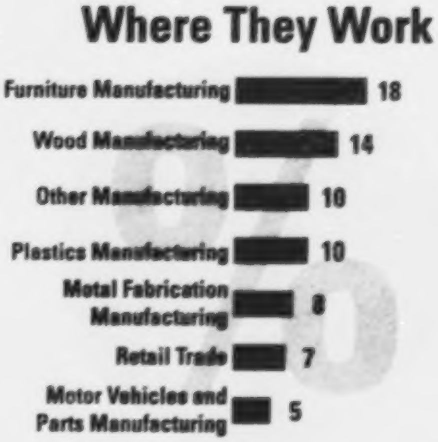
CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

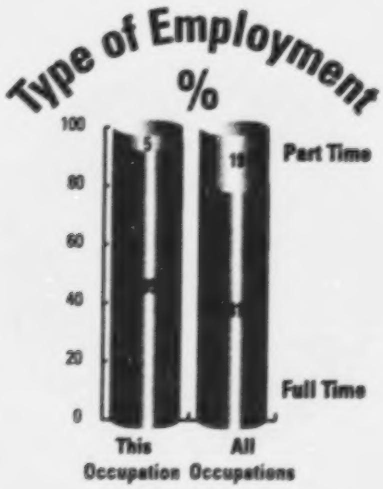
Unemployment Rate

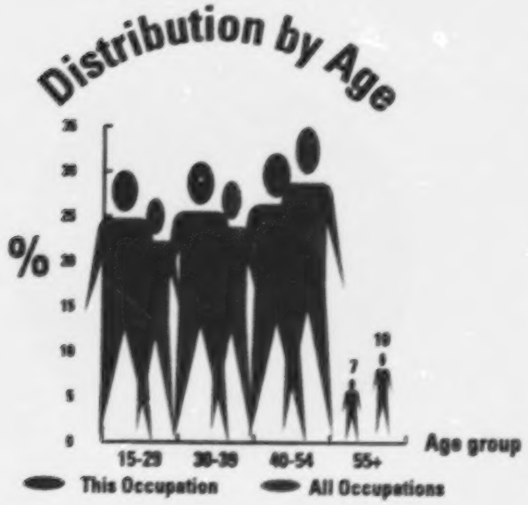


Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Other Assembly and Related Occupations







At Work

People in this group work in marine craft, furniture, and wood, plastic and metal products manufacturing companies, and furniture refinishing and customized metal plating and coating shops.

- Boat assemblers put together wooden, fibreglass and metal boats.
- Furniture and fixture assemblers put parts together to form subassemblies and completed furniture and fixtures.
- Wood products assemblers put together a variety of wood products.
- Furniture finishers finish new wood or metal furniture to specified colour and finish.
- Painters and coaters in manufacturing use machines, brushes and spray equipment to apply paint and other non-metallic coatings.
- Plating, metal spraying and related operators run machines and equipment to apply metallized substances to metal and other objects.
- Assembly inspectors inspect subassemblies and finished products to ensure product quality.
- Other assemblers put together a variety of products such as jewellery, clocks, musical instruments and toys.

Education, Training & Experience

- People in this group usually require secondary school education. Many recent entrants have a high school diploma or a trade/vocational certificate.
- They usually receive on-the-job training.
- Apprenticeship is available for some occupations.
- Furniture finishers and some industrial painters such as aircraft painters may require college courses or specialized training.
- Plating and metal spraying operators may need experience in operating production machinery.
- Assemblers, finishers and inspectors may need experience as labourers, helpers or assemblers.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: T312, T362, [illegible], [illegible], T314, [illegible], [illegible]

NOC 949

In These Occupations...

- 92,000 people were employed in 1998, an increase of 5.5% from 1988. After declining 16.9% over the 1988 to 1993 period, employment increased 26.9% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 20% are painters and coaters in manufacturing and 19% are furniture and fixture assemblers and inspectors.
- 5% work part-time, well below the average of 19% for all occupations.
- 8% are self-employed, compared to an average of 17% for all occupations.
- 26% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 9.3% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are comparable to those for other occupations with similar education/training requirements and for other occupations in the processing, manufacturing and utilities sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities are average and earnings are at the average level for comparable occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Use of new manufacturing technologies in the furniture sector will require new entrants to this sector to have the basic skills needed to call up computer programs, read and interpret printouts and adjust production machinery accordingly.
- Employment requirements for these occupations are expected to increase across a broad range of industries through 2004.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	39 000	47 800	54 600
Average	29 900	35 900	39 600
Lowest 20%	19 400	22 400	24 700

Age Group

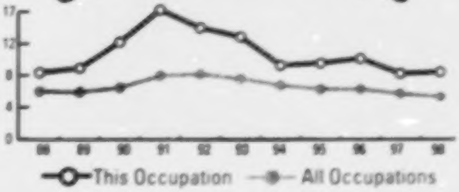
Overall Average for All Ages (15+)

This Occupation	All Occupations
30 500	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

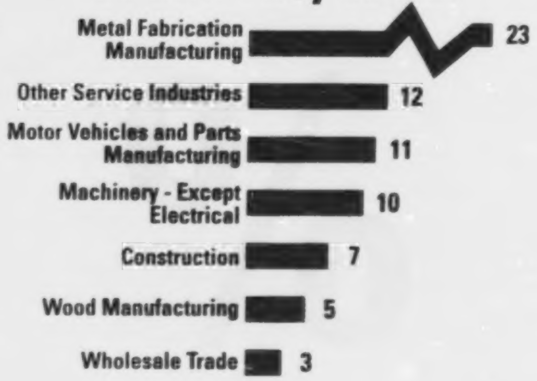
Unemployment Rate



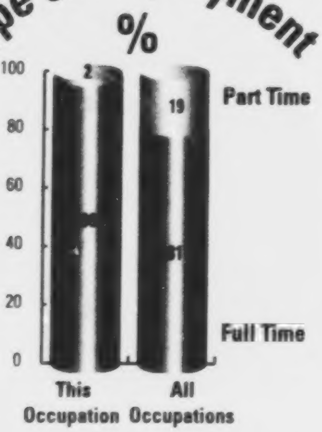
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Machining, Metalworking, Woodworking and Related Machine Operators

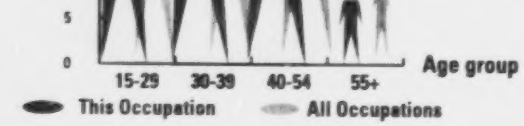
Where They Work



Type of Employment



Distribution by Age



At Work

These machine operators work for heavy machinery, transportation equipment, aircraft and ship building industries; sheet metal and machine shops; manufacturers of furniture, fixtures and other wood products; light metal and structural steel fabrication plants; and manufacturers of boilers and platework.

- Machining tool operators turn, mill, drill, bore, plane, hone, broach and grind to produce machined parts. They may etch or chemically mill metal pieces.
- Forging machine operators form metal into shapes and impart hardness, strength and other characteristics.
- Woodworking machine operators fabricate and repair parts for wood products.
- Light metalworking machine operators shape and form sheet and light metal into parts and products.
- Heavy metalworking machine operators shape and form steel or other heavy metal into parts or products.
- Welding machine operators fabricate and repair metal parts using spot, butt and seam resistance machines or gas and arc welding machines.
- Brazing and soldering machine operators bond metal parts and fill holes, indentations and seams in metal articles with solder.
- Other metal products machine operators run machines such as wire looms to produce metal parts and products such as fencing, nails and chains.

Education, Training & Experience

- These machine operators usually require secondary school education. Most recent entrants have a high school diploma or a trade/vocational certificate.
- They usually receive on-the-job training.
- They may need experience as labourers or helpers in their company.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 9510, 9511, 9514
Part 2 Field of Study Cross-index: T333, T383, C331, T314, T362, C380, C362, C315

NOC 951

In These Occupations...

- 113,000 people were employed in 1998, an increase of 2.5% from 1988. After declining 18.3% over the 1988 to 1993 period, employment increased 25.5% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 60% are welders and soldering machine operators; 11% are metalworking machine operators; and 11% are machining tool operators.
- 2% work part-time, well below the average of 19% for all occupations.
- 5% are self-employed, well below the average of 17% for all occupations.
- 11% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 8.2% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the highest for occupations with similar education/training requirements but are comparable to those for other occupations in the processing, manufacturing and utilities sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Fair", since employment opportunities are average, although earnings are above the average level for comparable occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Those with the ability to work with high-technology applications in these occupations may have better opportunities.
- Most of the increase in employment requirements through 2004 for these occupations is expected to occur in the non-electrical machinery, metal fabrication and construction industries.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	41 000	50 400	57 000
Average	31 400	38 000	42 400
Lowest 20%	21 000	25 500	28 000

Age Group

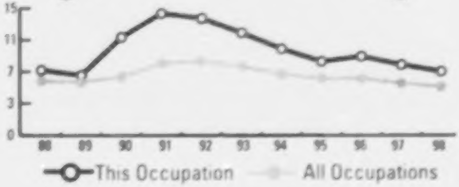
Overall Average for All Ages (15+)

This Occupation	All Occupations
36 300	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

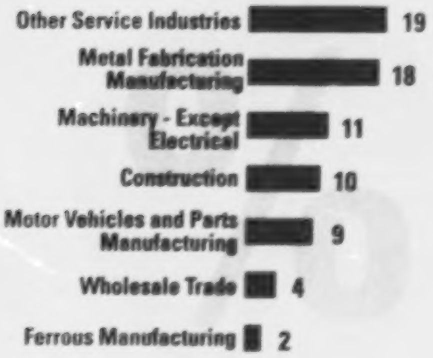
Unemployment Rate

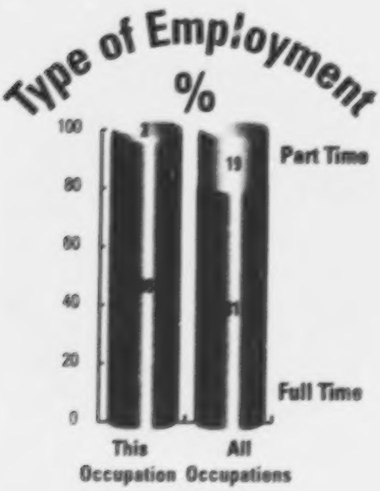


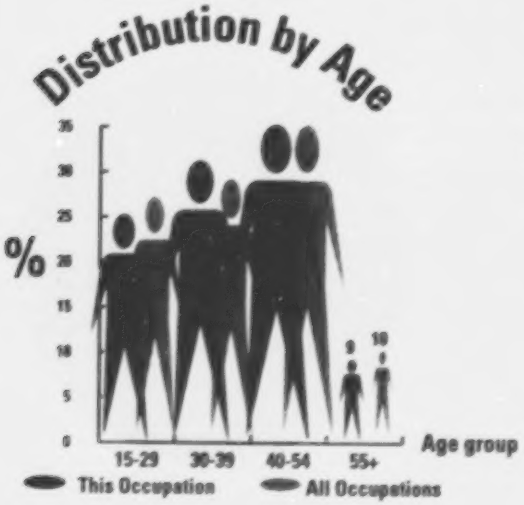
Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Welders and Soldering Machine Operators

Where They Work







At Work

People in this occupation work in companies that manufacture structural steel and platework, boilers, heavy machinery, aircraft, ships, and transportation and other metal products. Welders are also employed by welding contractors, welding shops and other industrial sectors.

- Welders operate manual and semi-automatic welding equipment to weld ferrous and non-ferrous metals following blueprints and welding process specifications. They may specialize in certain types of welding such as ship building, aerospace precision welding and pipeline construction welding.
- Welding machine operators use previously set up welding machines such as spot, butt and seam resistance or gas and arc welding machines to fabricate and repair metal parts.
- Brazing and soldering machine operators use previously set up brazing and soldering machines to bond metal parts and to fill holes, indentations and seams in metal articles with solder.

Education, Training & Experience

- People in this occupation usually require secondary school education. Many recent entrants have a trade/vocational certificate.
- To gain trade certification, welders usually must complete a three-year apprenticeship program or have a combination of over three years' experience and some college or industry courses in welding.
- Trade certification for welders is compulsory in Alberta. It is available, but voluntary, in Nova Scotia, Newfoundland, Prince Edward Island, New Brunswick, Manitoba, Saskatchewan, British Columbia, the Northwest Territories and the Yukon. Qualified welders may also obtain interprovincial (Red Seal) trade certification which provides job mobility throughout the country.
- Welding, brazing and soldering machine operators usually require several months' on-the-job training and may require experience as machine operator helpers.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 951
Part 2 Field of Study Cross-index: T333, T383, T315, T362, T314

NOC 9510

In These Occupations...

- 68,000 people were employed in 1998, a decrease of 4.5% from 1988. However, after declining 26.3% over the 1988 to 1993 period, employment increased 29.7% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 2% work part-time, well below the average of 19% for all occupations.
- 6% are self-employed, well below the average of 17% for all occupations.
- 4% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 9.6% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the highest for occupations with similar education/training requirements but are comparable to those for other occupations in the processing, manufacturing and utilities sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Limited" as a result of long-term employment losses.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Those with the ability to work with high-technology applications in this occupation may have better opportunities.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the non-electrical machinery, construction and metal fabricating industries.

Earnings

20 - 29	30 - 39	40 - 49	Age Group
42 300	53 600	59 100	**Highest 20%**
32 700	40 000.	44 800	**Average**
21 400	26 700	29 900	**Lowest 20%**

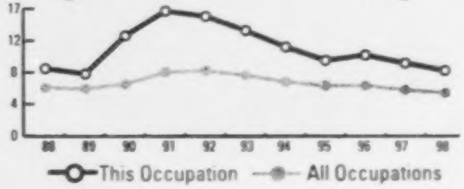
Overall Average for All Ages (15+)

This Occupation	All Occupations
38 200	37 400

Work Prospects

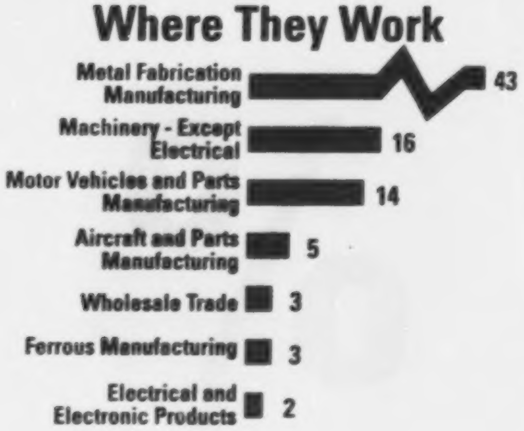
CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

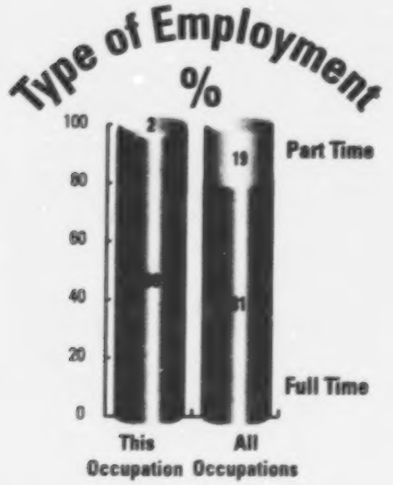
Unemployment Rate

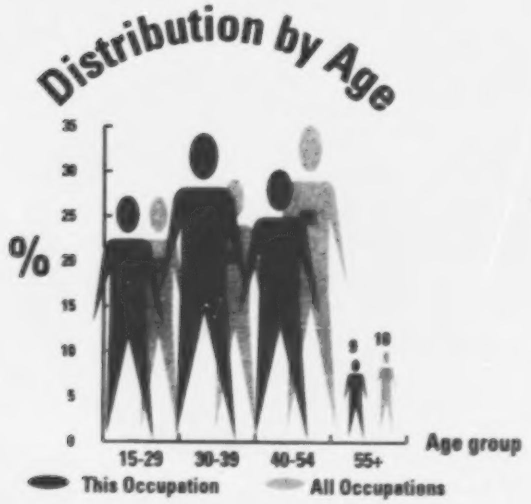


Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Machining Tool Operators


Where They Work


Type of Employment


Distribution by Age

At Work

Machining tool operators work for machine shops and metal products and other manufacturing companies. Their duties may require them to:

- interpret job orders and blueprints to determine machining operations;
- set up and operate machines to perform operations such as turning, milling, drilling, boring, planing, honing, broaching and grinding;
- verify dimensions of machined parts using precision measuring instruments; and
- prepare an etching solution and immerse metal parts or work pieces in the solution to remove unwanted portions.

This occupation includes milling machine set-up operators, production gear cutters, and operators of lathe machines, boring mills, radial drills and numerical control machines. It also includes workers who etch or chemically mill metal pieces.

Education, Training & Experience

- Machining tool operators must complete some high school education. Many recent entrants have a trade/vocational certificate or a community college diploma.
- They may require college or other courses in machining.
- They usually receive several months' on-the-job training.
- Senior positions, such as set-up operator, require that workers have experience as machine operators.
- Experienced operators may become machinists through apprenticeship training.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Related Occupation(s): 951
Part 2 Field of Study Cross-index: T383, T315, T720

NOC 9511

In These Occupations...

- 12,000 people were employed in 1998, an increase of 4.3% from 1988. After declining 15.2% over the 1988 to 1993 period, employment increased 22.9% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 2% work part-time, well below the average of 19% for all occupations.
- 2% are self-employed, well below the average of 17% for all occupations.
- 14% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 4.7% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the lowest for occupations with similar education/training requirements and for occupations in the processing, manufacturing and utilities sectors.
- the average earnings are among the highest for occupations with similar education/training requirements but are comparable to those for other occupations in the processing, manufacturing and utilities sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Good", since employment opportunities and earnings are both above the average levels for comparable occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Those with the ability to work with high-technology applications in this occupation - in particular, numerically controlled machines linked to computers - may have better opportunities.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the non-electrical machinery and metal fabricating industries.

Earnings

	20 - 29	30 - 39	40 - 49
Highest 20%	41 500	52 100	56 800
Average	32 300	40 100	43 000
Lowest 20%	22 500	27 300	30 300

Age Group

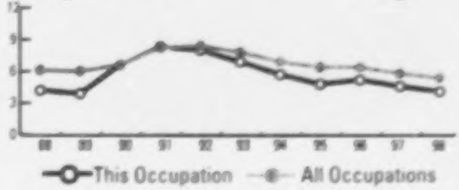
Overall Average for All Ages (15+)

This Occupation	All Occupations
37 400	37 400

Work Prospects

CURRENT	2004
[✓ GOOD]	[✓ GOOD]
FAIR	FAIR
LIMITED	LIMITED

Unemployment Rate



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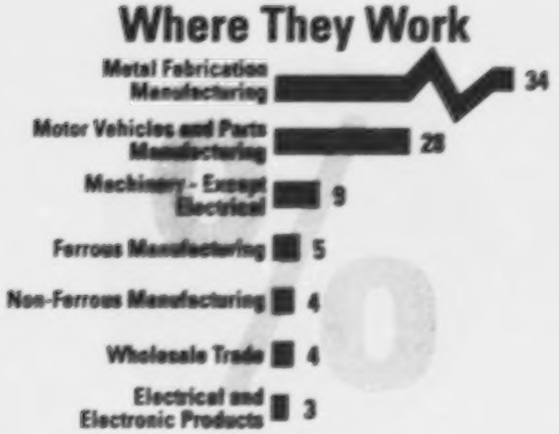
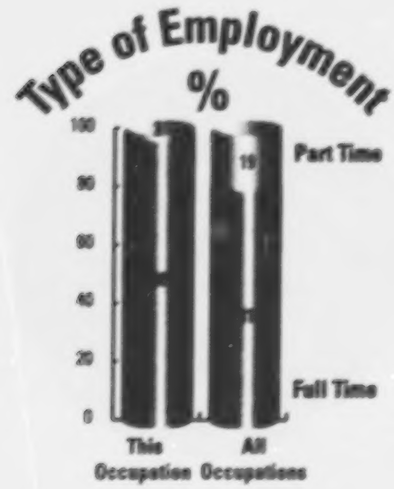
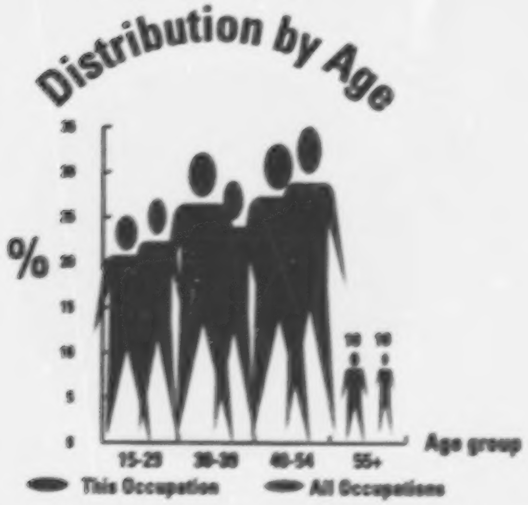
Metalworking Machine Operators







At Work

Light metalworking machine operators work for sheet metal products manufacturing companies, sheet metal shops and other light metal products manufacturing organizations. Heavy metalworking machine operators are employed by structural steel fabrication, boiler and platework manufacturing companies, and by heavy machinery companies. Their duties may require them to:

- read specifications or follow oral instructions;
- set up and operate metalworking machines to cut, bend, roll, ream, punch and drill or otherwise shape and form metal stock into parts and products;
- operate machines that weld, solder, bolt, screw and rivet metal parts together;
- check products for correct shapes, dimensions and other specifications;
- select and transport material manually or using cranes or hoists; and
- clean and lubricate equipment and replace parts as required.

Education, Training & Experience

- Metalworking machine operators must complete some high school education. Most recent entrants have a high school diploma or a trade/vocational certificate.
- They usually receive on-the-job training.
- They may require previous experience as labourers or helpers in the same company.
- With experience, they may progress to positions such as structural metal fabricator or supervisory positions.

Check out the 'big picture' in "World of Work: Overviews and Trends"

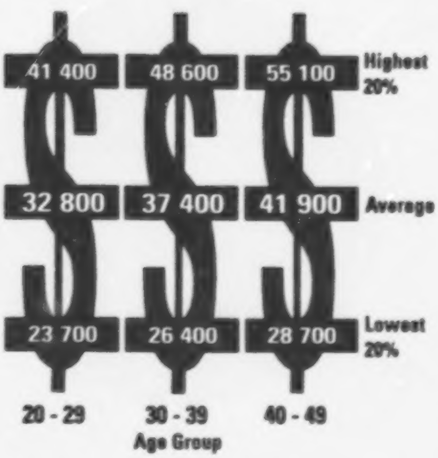
In These Occupations...

- 12,000 people were employed in 1998, an increase of 8.5% from 1988. After declining 4.8% over the 1988 to 1993 period, employment increased 14.0% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 2% work part-time, well below the average of 19% for all occupations.
- 1% are self-employed, well below the average of 17% for all occupations.
- 21% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 7.1% from 1996 to 1998, compared to the national average of 6.0%.
- the average earnings are among the highest for occupations with similar education/training requirements but are comparable to those for other occupations in the processing, manufacturing and utilities sectors.
- employment changes tend to mirror movements in overall economic activity.

National Outlook to 2004

- Currently, chances of finding work in this occupation are rated "Fair", since employment opportunities are average, although earnings are above the average level for comparable occupations.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Those with the ability to work with high technology applications in this occupation may have better opportunities.
- Most of the increase in employment requirements through 2004 for this occupation is expected to occur in the non-electrical machinery and metal fabricating industries.

Earnings



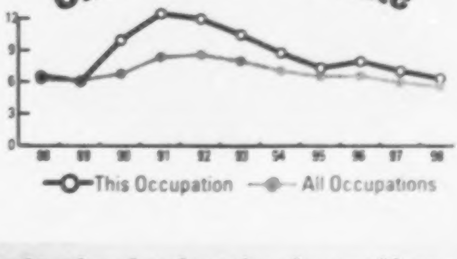
Overall Average for All Ages (15+)

35 900	37 400
This Occupation	All Occupations

Work Prospects

CURRENT	2004
GOOD	GOOD
[✓ FAIR]	[✓ FAIR]
LIMITED	LIMITED

Unemployment Rate



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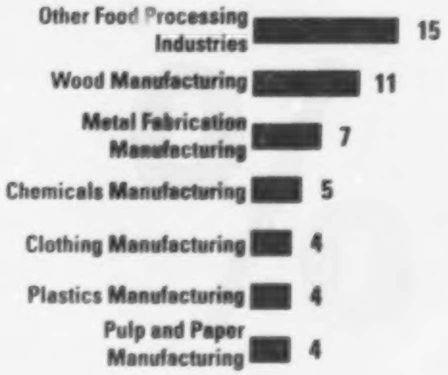
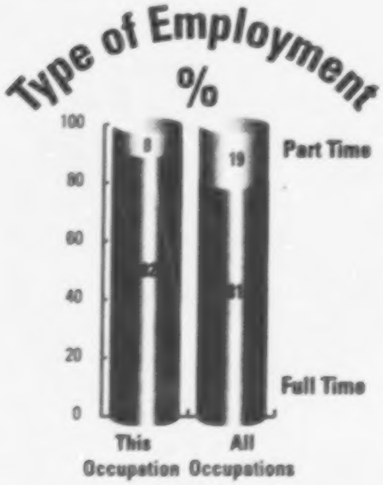
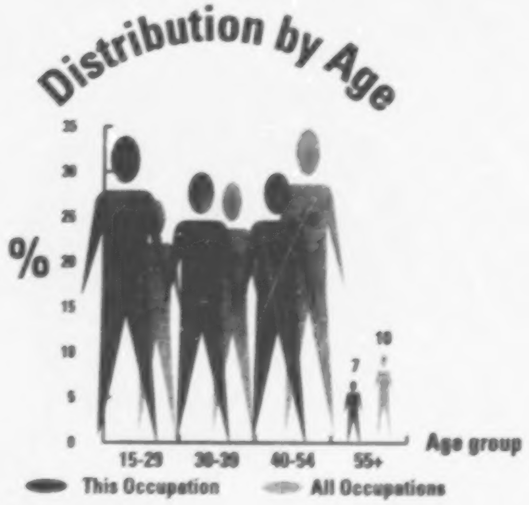
Labourers in Processing, Manufacturing and Utilities

Where They Work




Type of Employment


Distribution by Age

At Work

These labourers work for a wide variety of manufacturing and processing companies such as those involved in copper, lead and zinc refining; uranium processing; clay, glass and stone processing; heavy machinery manufacturing; textiles, rubber and plastic products manufacturing; petroleum and natural gas processing; pulp and paper processing; food, beverage, tobacco and fish processing; clothing, footwear and furniture manufacturing; electrical and electronic products manufacturing; and printing and packaging. Their duties may require them to:

- transport raw materials;
- load, unload, sort, check and weigh raw materials and products;
- feed machines such as conveyers, crushers, saws and processing machines;
- clean work areas and equipment; and
- assist more skilled workers.

Education, Training & Experience

- Labourers may require some high school education. Many recent entrants have a high school diploma.
- Labourers in wood, pulp and paper processing working in the pulp and paper industry and for other large employers must have a high school diploma.
- With experience, most labourers may progress to machine operating positions or other more skilled jobs within their area of work.

Check out the 'big picture' in "World of Work: Overviews and Trends"

Part 2 Field of Study Cross-index: T314, T332, C315, T301

NOC 961

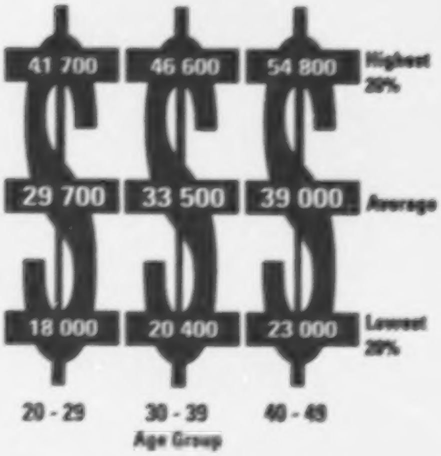
In These Occupations...

- 242,000 people were employed in 1998, an increase of 8.1% from 1988. After declining 7.2% over the 1988 to 1993 period, employment increased 16.5% between 1993 and 1998. In comparison, employment in all occupations grew 12.3% over the same ten years, and 8.2% over the last five.
- 23% work in food, beverage and tobacco processing and 16% work in wood, pulp and paper processing.
- 9% work part-time, well below the average of 19% for all occupations.
- 1% are self-employed, well below the average of 17% for all occupations.
- 34% are women, well below the average of 45% for all occupations.
- the unemployment rate averaged 12.1% from 1996 to 1998, compared to the national average of 6.0%. This rate is among the highest for occupations in the processing, manufacturing and utilities sectors.
- the average earnings are comparable to those for other occupations with similar education/training requirements but are among the lowest for occupations in the processing, manufacturing and utilities sectors.

National Outlook to 2004

- Currently, chances of finding work in these occupations are rated "Limited", since employment opportunities and earnings are both well below average.
- Over the next five years, this outlook is not expected to change, as the number of job openings is expected to be matched by the number of qualified job seekers.
- Employment requirements for these occupations are expected to increase across a broad range of industries through 2004.

Earnings



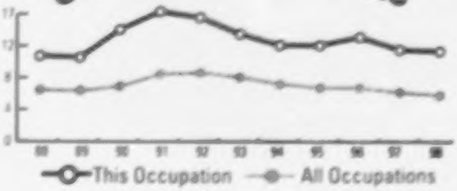
Overall Average for All Ages (15+)

This Occupation	All Occupations
27 200	37 400

Work Prospects

CURRENT	2004
GOOD	GOOD
FAIR	FAIR
[✓ LIMITED]	[✓ LIMITED]

Unemployment Rate



Refer to "Understanding the Occupational Profiles" for a detailed explanation of each section above and how to use it, as well as underlying methodologies and data sources.

Job Futures 2000

Appendices

Job Futures - Glossary of Terms

Term	Definition
Accreditation	• process that an agency or an association uses to grant public recognition to a training institution, program of study, individual or service that meets pre-set standards.
Applied Research Branch (ARB)	• a branch within Human Resources Development Canada which studies various characteristics of Canadians to help determine policy, or changes to policy, that may be implemented by the Government of Canada depending on the results of the research. Research areas include the workplace, child welfare, employment insurance, aging, labour market conditions, occupational projections, etc. ARB also publishes the *ARB Bulletin, Job Futures* and various other research papers.
ARB	**• see Applied Research Branch**
Average Annual Rate	• in *Job Futures,* this phrase describes the growth in employment or the number of graduates, averaged over a five- or ten-year period, e.g., from: 1990 to 1995 the number of graduates increased by 10%, or at an average annual rate of 2% per year. The average annual rate reports the growth as being evenly distributed over each year. This will smooth a slightly irregular yearly growth pattern.
Bachelor's Degree	• undergraduate degree of university education which may take from three to five years to complete. In *Job Futures,* the reference to Bachelor's degree or level includes undergraduate diploma or certificate programs which may take from one to two years to complete.
Canadian Occupational Projection System (COPS)	• a family of economic models used to forecast current or future labour market conditions on an industrial and occupational basis. The system takes into account both the supply of, and the demand for, workers by industry and occupation.
Career	• used to describe the sequence of occupations, jobs or positions held in the lifetime of a person.
Census (e.g.,1991,1996)	• a survey of all Canadians conducted every five years across Canada by Statistics Canada. Used to determine population characteristics such as number of people, ages, education level attained, employment, unemployment, occupations, earnings, etc.
Certification	• the issuance of a formal document that certifies or declares that the holder possesses a set of skills, knowledge and abilities, usually received after completion of education/training/experience in the related areas.
College	• post-secondary institution offering certificate and diploma programs. Courses are usually one to three years in length.

*** Bold denotes other definitions found in this glossary**

Term	Definition
Contracting-out	• when an organization hires someone from outside their organization to perform a pre-defined task, for an agreed upon fee, in a set period of time. Synonymous with outsourcing.
COPS	**• see Canadian Occupational Projection System**
Current Outlook	• used to describe the chances of finding employment for each occupation or field of study in *Job Futures* in the current period of time. **• see *Understanding the Occupational Profiles* in *Part 1* and *Understanding the Field of Study Profiles* in *Part 2*.**
Data	• numerical information which captures historical facts, used for analysis to describe and characterize why events have occurred.
Demand	• in the context of *Job Futures*, this term represents the number of workers that employers need to produce a given quantity of goods or services.
Earnings	• income that workers receive in the form of wages, salaries and net self-employed earnings. Excludes other forms of compensation such as retirement benefits, stock options or expense accounts. **• see Earnings (Full-time); (Full-year); (Part-time); and (Part-year)**
Earnings (Full-time)	• income that workers receive in the form of wages, salaries and net self-employed earnings from working 30 hours or more per week in their main job.
Earnings (Full-year)	• income that workers receive in the form of wages, salaries and net self-employed earnings from working either full time, part time, or both for the entire year.
Earnings (Part-time)	• income that workers receive in the form of wages, salaries and net self-employed earnings from working less than 30 hours per week in their main job.
Earnings (Part-year)	• income that workers receive in the form of wages, salaries and net self-employed earnings from working either full time, part time, or both for only part of the year.
Economic Conditions	• indicator of the state of the Canadian economy, in particular those relevant to the labour market.
Education, Training and Experience	**• see *Understanding the Occupational Profiles* in *Part 1*.**
Education Level – Community College	• Community college includes graduates of career programs, hospitals and schools of nursing, colleges d'enseignement general et professional (CEGEPs) and teachers colleges, but excludes university transfer program graduates.
Education Level – Master's, University	• Master's, university includes master's degrees and graduate diplomas and certificates.

*** Bold denotes other definitions found in this glossary**

Term	Definition
Education Level - Trade/Vocational	• Trade/vocational includes pre-employment or pre-apprenticeship and skill upgrading courses lasting three months or more, but does not include block release apprenticeship training, basic training for skill development, language training and job readiness training.
Education Level – Undergraduate, University	• Undergraduate, university includes bachelor's degrees, first professional degrees, and undergraduate diplomas and certificates.
Employed	• an individual who is working full time, part time, or for themselves. • **see Employed (Full-time); (Full-year); (Part-time); (Part-year); and Self-employed.**
Employed (Full-time)	• an individual who works 30 hours or more per week in their main job.
Employed (Full-year)	• an individual who had a job, either full time, part time, or both, for the entire year.
Employed (Part-time)	• an individual who works less than 30 hours per week in their main job.
Employed (Part-year)	• an individual who had a job, either full time, part time, or both, for only part of the year.
Employment Requirements	• the number of workers required by a specific industry to provide a certain quantity of goods or services. Synonymous with "demand."
Experience	• the knowledge and skills acquired through the performance of a set of activities.
"Fair" rating	• rating for current and future outlooks in Job Futures. • "Fair" labour market outlooks are neither "Good" nor "Limited". Jobs are more difficult to find; the probability of unemployment is higher; and wages and salaries are lower than in comparable occupational groups which are rated "Good." On the other hand, jobs are easier to find; unemployment is less likely; and wages and salaries are higher than in comparable industrial or occupational groups which are rated "Limited." • **see *Understanding the Occupational Profiles* in *Part 1* and *Understanding the Field of Study Profiles* in *Part 2*.**
Field of Study (Major)	• for purposes of analysis, the COPS group has lumped together certain programs of study. In *Job Futures* there are 34 trade/vocational fields of study, 42 at the community college and CEGEP level of study, 45 at the bachelor's university level, and 45 at the master's university level. • **see Program of Study.**
Field of Study (Broad)	• a grouping of major fields of study into nine broader areas of study including arts, business, education, engineering, humanities, life sciences, primary technologies, medicine and health, physical science, social sciences, and services. • **see Field of Study (Major).**

*** Bold denotes other definitions found in this glossary**

Term	Definition
Forecast	• in a *Job Futures* context, this term is used interchangeably with projection. **• see Projection.**
Forecast Period	• for the purposes of *Job Futures 2000*, the forecast period/horizon is 1999 to 2004.
Forecast Tool	• in the context of *Job Futures*, this term includes computer models, quantitative and qualitative information, expert knowledge, and a broad consultation network.
FOS	**• see Field of Study (Major) or (Broad)** **• see *Understanding the Field of Study Profiles***
Future Outlook	• an estimation of the chances of finding work in the future for each occupation or field of study in *Job Futures*, based on past and current labour market conditions, and expert analysis of potential future trends for each occupation.
"Good" rating	• rating for current and future outlooks in *Job Futures*. • "Good" labour market outlooks usually mean that finding stable work is relatively easy and working conditions are attractive or improving. **• see *Understanding the Occupational Profiles* in *Part 1* and *Understanding the Field of Study Profiles* in *Part 2*.**
Industry	• a group of establishments who produce a common set of goods or services. For example, the retail trade industry includes all establishments who buy goods and resell them to the general public.
Industry Association	• an organization of companies that represents the industry and acts as a common spokesperson for the membership.
Job	• a paid position that requires specific knowledge, skills, experience or training that allows a person to perform a variety of required tasks in an organization.
Labour Force	• represents the population 15 years of age and older across Canada that is employed or unemployed, but actively looking for work.
Labour Force Survey (LFS)	• a monthly survey conducted across the 10 provinces in Canada by Statistics Canada of approximately 48,800 households to determine whether people above 14 years of age are working, not working, actively looking for work or no longer actively looking for work, i.e., not in the labour force.
Labour Market	• the forum where buyers of labour, i.e., employers, and sellers of labour, i.e., employees, meet to satisfy job requirements within the Canadian economy or marketplace.

*** Bold denotes other definitions found in this glossary**

Term	Definition
Labour Market Conditions	• labour market conditions in a *Job Futures* context are defined as "Good," "Fair" or "Limited". • "Good" labour market conditions usually mean that finding stable work is relatively easy and working conditions are attractive or improving. • "Fair" labour market conditions are neither "Good" nor "Limited." Jobs are more difficult to find; the probability of unemployment is higher; and wages and salaries are lower than in comparable occupational groups, which are rated "Good." On the other hand, jobs are easier to find; unemployment is less likely; and wages and salaries are higher than in comparable industrial or occupational groups, which are, rated "Limited". • "Limited" labour market conditions mean that new entrants and re-entrants will have difficulty finding stable work, or that working conditions are not attractive or are deteriorating relative to those in other industries or occupations. For new entrants, such as school-leavers and immigrants, limited labour market conditions mean a low probability of finding permanent work and, if they find a job, relatively low pay. For employed workers, these relatively weak conditions will often mean a high probability of loss of work, a high probability of experiencing unemployment spells, and lower wages and salaries.
Labour Market Information (LMI)	• quantitative and qualitative information on employment, wages, standards, qualifications, job openings, working conditions and other factors related to the labour market.
Level of Study	• refers to the level of education, e.g., trade/vocational, college and university.
LFS	**• see Labour Force Survey**
"Limited" rating	• rating for current and future outlooks in *Job Futures*. • "Limited" labour market outlooks mean that new entrants and re-entrants will have difficulty finding stable work, or that working conditions are not attractive or are deteriorating relative to those in other industries or occupations. For new entrants, such as school-leavers and immigrants, limited labour market outlooks mean a low probability of finding permanent work and, if they find a job, relatively low pay. For employed workers, these relatively weak conditions will often mean a high probability of loss of work, a high probability of experiencing unemployment spells, and lower wages and salaries. **• see *Understanding the Occupational Profiles* in *Part 1* and *Understanding the Field of Study Profiles* in *Part 2*.**
LMI	**• see Labour Market Information**
Master's Degree	• post-graduate level of education attained after the successful completion of a Bachelor's degree at the university level. May take from one to two years to complete, depending on undergraduate qualifications and the Master's degree sought.
Mobility	**• see Occupational Mobility**

*** Bold denotes other definitions found in this glossary**

Term	Definition
National Graduate Survey (NGS)	• frequent survey of post-secondary school graduates conducted by Statistics Canada in which certain questions are asked of graduates two and five years after graduation that link education and training with current labour market status. Two-year surveys were conducted in 1984, 1988, 1992 and 1997. Five-year follow-up surveys were conducted in 1987, 1991 and 1997.
National Occupational Classification (NOC)	• classifies all occupations in Canada. This system of coding is the basis for the organization of occupations in *Job Futures*. **• see *Understanding the Occupational Profiles* in *Part 1.***
New Job Openings	• the total number of new jobs due to changing economic activity and positions becoming vacant because of death, retirement, occupational mobility, and temporary labour force withdrawal.
New Job Seekers	• the total number of new job seekers entering the labour force. This number is the sum of recent graduates from the formal post-secondary school system, recent immigrants, and people re-entering the labour force after a temporary withdrawal, e.g., child bearing or rearing, educational leave, discouragement.
NGS	**• see National Graduate Survey**
NOC	**• see National Occupational Classification**
Non-completers	• individuals who have recently left the school system without graduating.
Occupation	• a collection of jobs or types of work sharing similar skills and responsibilities.
Occupational Group	• a group of similar occupations found in various industries or organizations. In *Job Futures,* an occupational group (3 digit NOC code) is an aggregate grouping of two or more occupations (4 digit NOC code). **• see *Understanding the Occupational Profiles* in *Part 1.***
Occupational Mobility	• when, for whatever reason, an individual moves from one job to another without experiencing an extended period of unemployment, e.g., worker to supervisor or manager, or is between occupations, e.g., bank teller to financial advisor.
Outsourcing	• when an organization hires someone from outside to perform a predefined task, for an agreed upon fee, in a set period of time. Synonymous with contracting-out.
Post-graduate	• continuing with some level of education after the completion of a university degree program, e.g. teaching certificate, lawyer, doctor, etc.
Post-secondary	• continuing with some level of education after completion of high school.
Prerequisites	• the previous education, training, experience, individual abilities, skills, or qualifications required for a person to undertake a particular program of study.

*** Bold denotes other definitions found in this glossary**

Term	Definition
Profession	• an occupation that requires specialized skills and advanced training.
Professional Association	• an organization that represents members of a professional occupation and may set standards for education/ training or professional designation.
Program of Study	• a detailed listing of areas of study developed by Statistics Canada. Encompasses some 150 areas of study at the university level and about 300 at the community college, CEGEP, and trade/vocational levels of study.
Projections	• a quantitatively based view of the future economy derived through the use of historical data, computer models, expert knowledge and consultations. In reference to *Job Futures*, the emphasis is on future labour market conditions. Synonymous with forecast.
Red Seal	• a nationally registered trademark symbol adopted for the Interprovincial Standards Program to signify interprovincial qualification of tradespersons at the journeyperson level. It is affixed to provincial and territorial *Certificates of Apprenticeship and Qualification* of those apprentices and tradespersons who have met the national standard in a Red Seal trade. The Red Seal is a passport that allows the holder to work anywhere in Canada without having to write further examinations.
School Leavers	• individuals who have recently left the school system. Includes graduates and non-completers. **• see non-completers.**
Sector	• in some instances, this term may be used to describe a grouping of industries or a grouping of occupations. **• see Industry.**
Sector Council	• an organization that represents an industrial sector in terms of occupations, productivity, and viability of the industry.
Self-employed	• a worker who works for themselves at their main job.
Skill Level	• a phrase used to classify occupations in the NOC by the level of training, education or experience required to perform an occupation. **• see *Understanding the Occupational Profiles* in *Part 1*.**
Skill Type	• a term used to classify occupations in the NOC by the industry or sector in which the majority of the occupations fall. **• see *Understanding the Occupational Profiles* in *Part 1*.**
Supply	• in the context of *Job Futures*, this term represents the number of individuals offering their services to employers, including new entrants to the labour market as well as those with or without a job.
Trade/Vocational	• higher level of education that may or may not require the completion of high school and may involve on-the-job training as part of the course requirements.

• Bold denotes other definitions found in this glossary

Term	Definition
Training	• the acquisition of knowledge or skills by the performance of tasks under the direct supervision of a person who has already acquired the knowledge or skill. Training can occur on the job or in an educational program.
Trend	• an ongoing change in a set of observations taken over time.
Unemployed	• when an individual is not employed, is looking for work, and is available for work.
Unemployment Rate	• the percentage of individuals who are actively looking for work and are able to work but do not have a job, i.e., the number of unemployed individuals divided by the total number of people 15 years of age and older who have a job or are actively looking for work multiplied by 100, expressed as a percentage. • in the context of *Part 1* of *Job Futures*, the unemployment rate excludes full-time students who may be actively looking for work, or who are employed, and includes only the unemployed who had a job in the past 12-month period. This allows the unemployment rate shown in *Job Futures* to be calculated for a particular occupation. However, this rate is lower than the published national unemployment rate due to these exclusions. • in the context of *Part 2* of *Job Futures*, the unemployment rate is the percentage of graduates who are actively looking for work and are able to work but do not have a job. **• see *Understanding the Occupational Profiles* in *Part 1* and *Understanding the Field of Study Profiles* in *Part 2*.**
University	• institution of higher education beyond the high school level, offering degree and certificate programs of study from one to four years in length, as well as post-graduate studies.

*** Bold denotes other definitions found in this glossary**

List of Organizations by Occupation (NOC)

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Royal Bank of Canada
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Web site: www.royalbank.com/careers/careeratrb/index.html

The Canadian Real Estate Association
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Web site: www.mls.ca

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Web site: www.shrc.ca

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Web site: www.cchse.org

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Ottawa, Ontario K2P 1B4
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Fax: (613) 232-1886
Web site: www.ctf-fce.ca

051 Canadian Association for Health, Physical Education, Recreation and Dance (CAHPERD)
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Fax: (613) 748-5737
E-mail: CAHPERD@rtm.activeliving.ca
Web site: www.activeliving.ca/cahperd

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Web site: www.cla.ca

Cultural Human Resource Council
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Fax: (613) 562-2982
E-mail: info@culturalhrc.ca
Web site: www.culturalhrc.ca

061 Canadian Professional Sales Association
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Fax: (416) 408-2684
Web site: www.cpsa.com

062 Retail Council of Canada
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Fax: (416) 922-8011
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063 Canadian Restaurant and Foodservices Association
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071 Canadian Air Traffic Control Association (C.A.T.C.A.)
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081 Canadian Institute of Forestry
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Canadian Independent Adjusters' Association
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313 Canadian Society of Hospital Pharmacists
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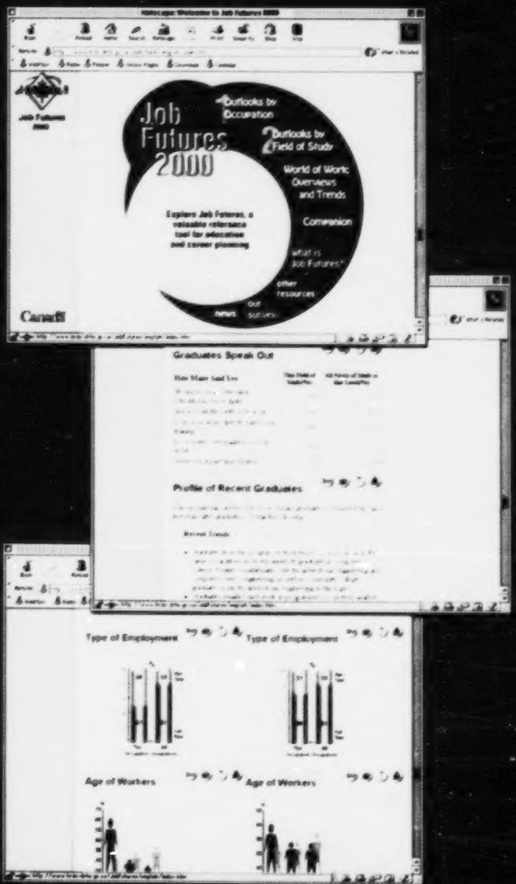
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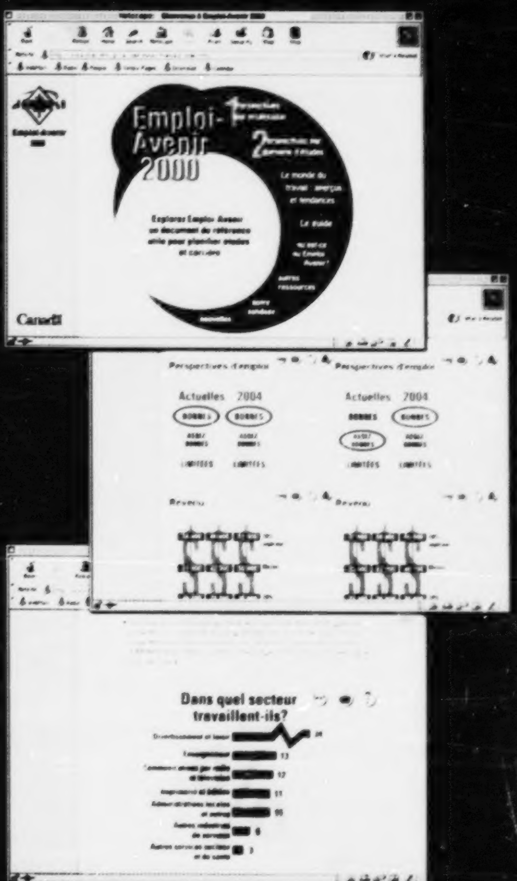
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